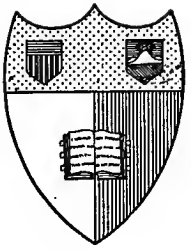
THE GOLDEN FLEECE

MORRIS & WOOD



COAT OF ARMS OF THE COUNTY BOROUGH OF ROCHDALE combining emblems of the woollen and cotton industries (a wool pack encircled by two branches of the cotton-tree, with a fleece as part of the crest). Granted in 1857

QUEEN ELIZABETH IN PARLIAMENT

The upper woolsack is the seat of the Chancellor, but is empty when the Queen is present, since he then stands at her right hand

THE GOLDEN FLEECE

An Introduction to the Industrial History of England

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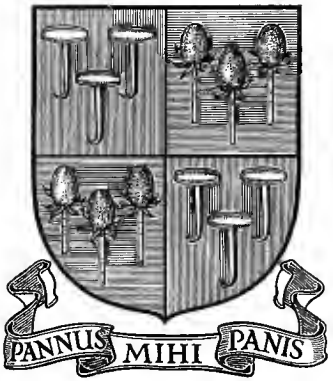

COAT OF ARMS OF THE BOROUGH OF KENDAL

The home of the famous ' Kendal Green '. The coat of arms is quartered with wool-hooks and teasels proper, and the Latin motto means : *Cloth is my bread*

PREFACE

MOST of the great industries of England have their own literature ; but it has generally been written from the technical point of view. Few of these industrial studies are suitable for the ordinary reader or are written with reference to the general economic history of the country. This book aims at giving to those who are interested in England's industrial development, as well as to those who are engaged in the woollen industry, some idea of the great part wool has played in England's history. It stands midway between the technical books on the subject and the general industrial histories of England. To suggest ideas and to trace tendencies has been held more important than mere erudition.

Each trade is a great romance, the story of the hopes, the fears, and the achievements of men for many generations, and there lingers about it the same fascination as haunts some great monument of the past—making us feel our kinship with the men who have gone before us.

To study the growth of a trade is to see the development of our national life from a new and more intimate point of view. Throughout her history, wool has been peculiarly the staple trade of England. On her upland pastures the sheep could graze in peace ; the streams from the hills gave abundance of pure, soft water for the preparation of the wool. In the Middle Ages sheep-rearing and cloth-weaving became in turn the national industries. The need of markets and the importance of the connexion with the Low Countries had no small share in dictating our foreign policy. Wool paid for our wars. The need for exporting wool led to the development of our shipping ; the fight for new markets from the sixteenth century onwards was the beginning of our colonial expansion ; and when the

period of the Industrial Revolution came, the coal, the iron, the water power enabled the English manufacturer to raise England to her position among the nations.

The field of our inquiry is limited, but it is not therefore narrow. Rather it opens up new views not only of English History, but of that larger history of which English History is but a part, and gives an understanding of the ties which bind men together in a common purpose.

In each Chapter those points have been dealt with which seemed properly to belong to the subject of the Chapter; the authors have preferred the occasional repetition of a detail to absence of clearness. We take this opportunity of thanking Mr. C. R. L. Fletcher for many valuable suggestions, and Mr. Randal H. New for kindly undertaking the construction of the Index.

G. W. M.
L. S. W.

BRADFORD,
October 1920

COAT OF ARMS OF THE CITY OF LEEDS

These arms are recorded in the visitation of the county of Yorkshire in 1662. Their heraldic description is: Azure, a fleece or, on a chief sable three mullets argent; Crest an owl argent; Supporters, on either side an owl argent ducally crowned or; Motto, 'Pro Rege et Lege'

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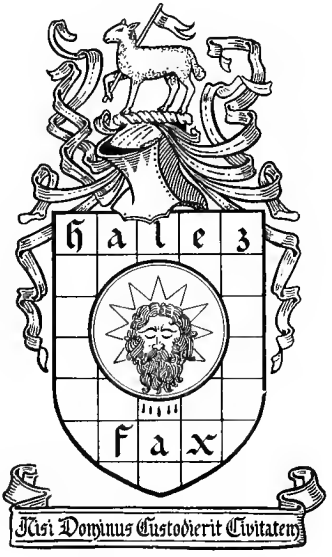


COAT OF ARMS OF THE COUNTY BOROUGH OF HALIFAX. Crest, a Paschal Lamb; Motto, 'Nisi Dominus custodierit civitatem'

LIST OF ILLUSTRATIONS

COVER DESIGN.—*La Toison d'or*. The Golden Fleece, one of the great knightly orders of Europe, was founded by Philip the Good, Duke of Burgundy, on his marriage with Isabella of Portugal at Bruges on Jan. 10, 1429/30. 'What', says Motley in *The Rise of the Dutch Republic*, 'could be more practical and more devout than the conception? Did not the Lamb of God, suspended at each knightly breast, symbolize at once the woollen fabrics to which so much of Flemish wealth and Burgundian power was owing, and the gentle humility of Christ, which was ever to characterize the order?' With the marriage of Mary, only daughter of Charles the Bold, to Maximilian, Archduke of Austria, in 1477, the grand-mastership of the order went to the House of Habsburg, and so in 1504, with the Netherland Provinces, to Spain on the accession of Maximilian's son Philip to Castile. In 1700 the Spanish branch of the Habsburgs became extinct. The Emperor Charles VI then claimed the grand-mastership, and in 1713 instituted the order in Vienna. Since then there have been two orders of the Golden Fleece, the Spanish and the Austrian. The design on the cover shows part of the Spanish insignia.

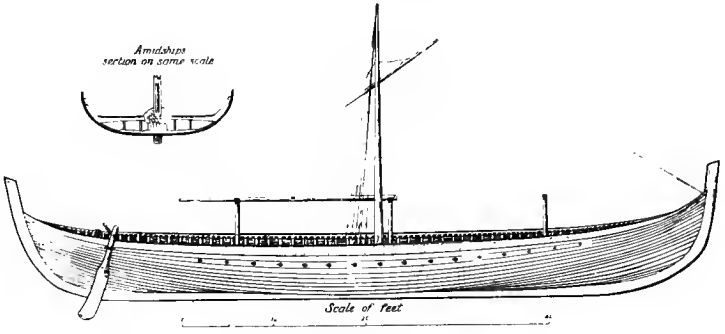
CHAPTER I

THE WOOL PACK IN THE MAKING OF ENGLAND

To-DAY we are constantly reminded how very close is the connexion between trade and the policy which a Government may wish to carry out either at home or abroad. For it is by trade in one form or another that the people live: if that does not prosper, they cannot prosper either. This is just as true of the past as of the present. And the kings did not forget it: in their Great Council they seated their chief minister, the Lord Chancellor, upon a wool sack as a token that it was upon wool and the trade in wool that England's power was founded. Though to-day the woollen industry is only one of the great trades of England, the Chancellor still sits upon the wool sack and reminds us of the great part that wool has played in the making of England. In particular it did three things. It had a great influence in deciding England's foreign policy, since her trade in wool with Flanders made it a matter of great concern to England who ruled in that country. It enabled England to grow rich and strong again after the Black Death, for the land which could no longer be tilled was enclosed and used to increase the pasturage for sheep. And it turned Englishmen's attention to the sea, making them traders and explorers, first in the Channel and the Baltic; then, under the Tudors, in Russia, the Mediterranean, and the Atlantic, till in the eighteenth century the spreading and development of England's trade was one of the chief considerations of her statesmen.

This growth of England's power on the sea we owe to the Northmen. The Romans did many things for us: they drained marshes and cleared forests: they built towns and harbours, and connected them with a great network of their magnificent roads—straight, enduring, majestic, the highway for the trader

and the legionary—linking Britain on to Europe: they gave us law and peace: they brought us Christianity. What the 'Roman Peace' meant can be understood by comparing a Roman country house with the castle built eight hundred years later: the one, unfortified, speaks of quiet and prosperity, of a time when Britain was one of the granaries of the Empire; the other of war and turbulence. But the Northmen had something to give us which the Romans had not: they were the great seamen of their day. In their narrow Viking galleys, at first only about 75 feet long, with sides about 4 feet above the water-line, they



THE GÖKSTADT BOAT

pushed out in the stormy waters of the North Sea, and faced the long Atlantic rollers. The story of the great storm of 876, when the shattered wreckage of 120 galleys was piled high under Swanage cliffs, tells of the grim price they paid for their sea-craft. But they stretched a girdle round the world from Labrador to Constantinople, from the White Sea to Palermo: they were the undisputed masters of the Western seas; and their blood runs in our veins to-day.

In this period of Viking raids we find the clue to many developments in our later history. The cause of these raids was the advance northward of the Christian armies of Charles the Great, 772–804, which aroused all the Scandinavian peoples. To these all Christians were enemies, and they raided and plundered on

both sides of the Channel indifferently. Alfred's great victory at Ethandune in 878, which saved England from paganism, drove them to seek an easier prey along the Flemish coast, till Arnulf, the valiant Count of Flanders, drove them back in 891 at Louvain. Alfred's last campaign, 892–6, was their final effort and a turning-point in the history of Europe. The beaten armies fell to pieces, and that energy which had made them dreaded in war was gradually turned to the more peaceful enterprise of the trader.

The common danger had been a link between the two sides of the Channel; and the marriage of Alfred's daughter to the Flemish Count was the beginning of that close interest in the affairs of the Low Countries which has been one of the fixed points in England's foreign policy down to the present time. The settlement of another branch of Northmen in Normandy under Rollo added a tie of relationship, and from the time of Edward the Confessor, half Norman by birth and wholly Norman in culture—for the Normans had been apt pupils and had surpassed their masters in the civilization of the West—the Channel was a means and not a barrier to trade. The Englishman had already begun to carry his wool to the Continent, and Edgar had begun to make laws fixing the export price. Under Edward the Confessor the merchants of Rouen had so much trade with England that they had their own 'dock' at London: and definite regulations were laid down for this 'alien' trade.

It was in the eleventh century that the era of the towns of Western Europe was beginning. At first only a collection of huts huddled round the strong walls of the abbey or the castle, the cathedral or the royal palace, the town had grown rich and independent under the protection of its lord; and there came a long and bitter struggle between the lord and his followers on the one side, who wished to keep the townsfolk 'in their place', and the citizens on the other, who strove to free themselves from the exactions of the lord and to develop their trade for their own benefit. It was in the great trading centres that this movement began; and of these Flanders was one of the chief. It lies

at the terminus of the great European trade route from East to West; the goods from the Far East were brought from the Levantine ports to Venice or Genoa and thence down the Rhine to Flanders, to be distributed throughout all the Baltic lands. On this traffic the Flemish merchants grew rich, and they early discovered the great secret of modern industry, that by manufacturing goods for export they could increase their wealth to an enormous extent. Their situation in the colder climate of Northern Europe, and their nearness to England, the chief wool-producing country, turned their attention to the manufacture of woollen goods. The country folk flocked into the towns to find employment at the looms, and the towns grew rich out of all proportion to the size and fertility of their territories. Then began, in the twelfth century, their struggle for independence, first with their Count, and then with the King of France to whom the Count turned for aid. At Courtrai in 1302 they showed Europe that citizen pikemen were more than a match for feudal cavalry, though at Cassel in 1328 they went down before the might of the King of France. They bided their time for their revenge: the ambition of Edward III was their opportunity, and under Jacques van Artevelde, a merchant prince of Ghent, they made an alliance with him against France. For England this alliance had a commercial as well as a political meaning, for Flanders was our best customer, and it was upon the wool trade that Edward depended for the money to carry on his war; while the absorption of Flanders by France would have been not only a blow to England's growing commerce, but a serious political danger.

The period of Flemish independence was a brief one: on the fatal field of Roosebeke, 1382, the men of Ghent, fighting with the bitterness of despair, were overwhelmed by the French cavalry, and 20,000 dead were left unburied on the field of battle. Though conquered they were unsubdued, and their hatred of the Valois kings remained as great as ever. When in 1364 Flanders became part of the rebellious French Duchy of Burgundy, the alliance with England remained; Margaret, the sister of Edward IV,

married the great duke of Burgundy, Charles the Bold. To him Edward fled for refuge when he was turned off his throne ; and, when Warwick the King-maker foolishly sought the help of the King of France against him, the Lancastrians lost the hearts of all good wool merchants and loyal Englishmen, and Flanders played its part in the Wars of the Roses.

In this commercial alliance between the two countries, England really had the whip hand. For the Flemings depended on England for their raw wool : if they misbehaved themselves, England replied by cutting off the supply of wool ; the looms stopped and famine was the result, as it would be in Yorkshire to-day if the Australian, South African, and South American supplies ceased. But undoubtedly Flanders got most of the profit : as one of their proverbs said, they bought the fox skin from the English for a groat, and sold them back the fox's tail for a guelder. The wars in Flanders drove some of the weavers to take refuge in England from the time of William the Conqueror onwards ; and the idea grew up that England might learn from them to manufacture her own wool and so keep the Flemings' profits for herself. Simon de Montfort urged this view, and after the disaster of Cassel Edward III adopted it as a definite policy, offering a refuge for such weavers as cared to come, and using them as ' technical colleges ' to teach the English their craft.

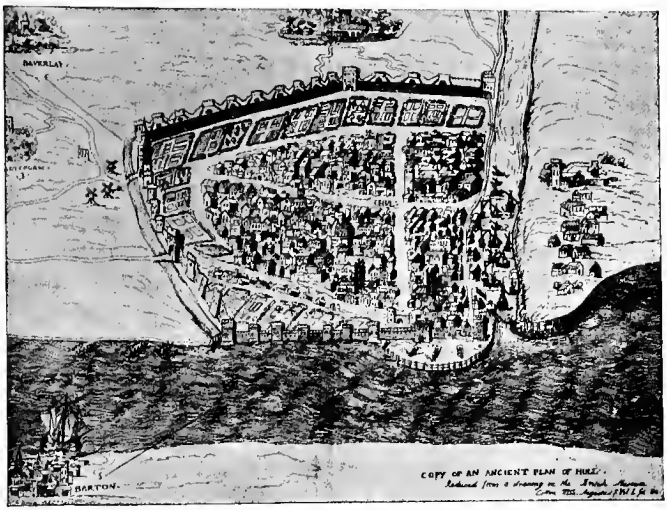
The great obstacle to trade in the Middle Ages was lack of security : there were robbers by land—not always so picturesque and kindly as Robin Hood—and pirates by sea, as well as the more legalized robbers, greedy barons, and sharp-dealing trade gilds in ' alien ' towns. The King could give the merchant security, and in return he could take what he badly needed—money. Henry I had done ' strong justice ' in England : at Hundehog, as the awe-struck chronicler admiringly tells, he hung four and forty men in one day—that was the kind of justice the dullest man could understand. Private war was sternly put down, and the sheep grazed at peace. Trade was still mainly between town and town : it ran in definite localized channels,

and gilds to manage the trade of each town were beginning.[1] In the thirteenth century the kings began to regulate the trade of England as a whole. Magna Carta, for instance, decreed that weights and measures were to be uniform throughout the kingdom. Henry II had done the same—though this was a hope rather than a fact for many years to come—and granted freedom to come and go to foreign merchants. But it was Edward I, the great law-giver, who really organized England's trade. His great anti-feudal statutes did much to break down the overgrown power of the barons and so give the merchant class a better chance to develop; and this process was helped by his summoning of Parliaments to co-operate with him in the government of the land. The Statute of Westminster in 1275 fixed at a definite rate the 'ancient custom' on exports—half a mark on each sack of wool, and one mark[2] on each last of hides. He also took a toll on wines and other imports, including cloth. Previously the King had exacted pretty much what toll he liked: but now, if the King attempted to levy toll over and above this 'ancient custom', it was called 'Maltolt' and fiercely resented, as Edward himself discovered in 1297 when he tried it and was compelled to 'confirm the Charters'. Alien merchants paid the 'new custom', which was roughly 50 per cent. higher. Royal officers were appointed to collect these customs at the ports. In return the merchants benefited, not only by knowing exactly what toll they would have to pay, but also by very tangible improvements in the ports and harbours themselves. The Cinque Ports, Hastings, Sandwich, Dover, Romney, and Hythe with their 'limbs' or members, corporate and non-corporate, such as Rye, Winchelsea, Ramsgate, Deal, Seaford, Faversham, and Dunwich, were given special privileges and exemptions, in return for the navy which they supplied—the only navy England

[1] The two earliest towns to have gilds were Burford, 1082, and Canterbury, 1093.

[2] The value of the mark was 13*s.* 4*d.*, or 160 silver pennies. 'Mark' at this period was a name: there was no such coin till the time of Henry VII.

had in those days. New trading towns were established, such as Kingston-upon-Hull and Great Yarmouth. Thus, although England was far from being the general carrier of Europe, for her ships were small (they had a crew of about twenty and could carry about eighty passengers), and most of the narrow-seas trade was still done by foreigners, yet the seamanship was good; and by Edward I's time it had come to be recognized that, next



A WALLED TOWN. An early plan of Hull

to the wool trade itself, shipping, on which the wool trade so largely depended, was the most important.

There remained the inland trade. The Statute of Winchester (1285) provided that towns were to be walled, and the gates shut from sunset to sunrise; strangers were not to enter after dark, nor to live in the suburbs unless they could get some one in the town to be security for them. Highways from one market town to another were to be enlarged and cleared of underwood 'wherein a man may lurk to do hurt' for two hundred feet on either side of the road. So a merchant might dwell at peace in his own town

and pass abroad on his lawful occasions in security. The recovery of trade debts was simplified by the Statute of Acton Burnell (1283). Previously there had been the cumbrous method of applying to the defaulters' own merchants' gild or the rough-and-ready method of seizing goods to an equal amount from any fellow-townsman of the defaulter who could be caught. Now the debtor was to be brought before the Mayor and required to sign an agreement to pay within a given time: failing which his property in that town or elsewhere was to be distrained upon.

Thus Edward I as part of his policy of making England a nation had put her trade upon a national footing: the mutual jealousy and exclusiveness of the towns had been largely broken down and some system had been introduced into the tangle of privileges which the gilds of the various towns had acquired or usurped. A basis of commercial law had been laid down, the beginning of a system of credit in business had been established, and the importance of the trading interest to the Crown had been recognized—the latter perhaps to a dangerous extent, since Edward attempted to obtain money by direct negotiations with the wool merchants instead of through Parliament. This policy of developing and regulating trade was carried still further by Edward III, especially in the direction of increasing England's foreign trade and in planting new industries, in particular the cloth industry, at home. Indeed, one might think that the Order of the Garter which Edward instituted would have been more appropriately named the Order of the Golden Fleece. He was engaged in his great war with France, and the money to pay for it came from the export of wool. The more the Continent was wasted the more precious English wool became, and the price went up from £2 to £8 per sack. The wool merchants became more important than ever, and there seemed a likelihood that a separate Estate of Merchants would come into existence, so that there would have been four estates of the realm instead of three—the Lords Spiritual, the Lords Temporal, the Commons, and the Wool Merchants. But Parliament stepped in. It passed in 1353 a Statute of Staples to regulate the export of

wool, and on two subsequent occasions (1362 and 1371) enacted that no new customs duty might be placed on wool without its consent. At this time England was producing forty-four different brands of wool. The weight table for measuring it was a simple one :

7 lb. = 1 clove.
52 cloves = 1 sack.

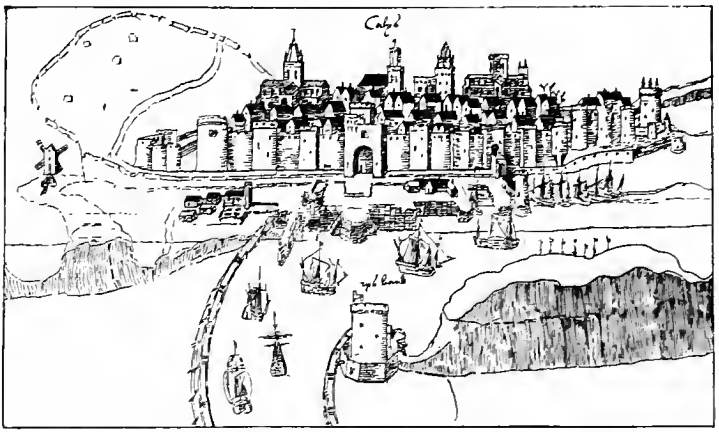
There were thus 364 lb. to a sack, and the average price per pound was about three pence or four pence.[1] The average annual export was over eleven and a half million pounds, with a value of about £180,000 : what that represents in modern money is very difficult to say, perhaps about £5,000,000.[2] But its real worth is more easily seen, by comparing it with the total revenue of the country, which was about £65,000 in times of peace. The customs from exported wool varied very much, especially in times of war when the King relied very largely upon it to make up the £90,000 or £100,000 additional revenue required : but in normal times it amounted to about £12,000—perhaps we might say roughly one-fifth of the ordinary peace-time revenue. There is an old English saying that 'more wars were fought for cloves than crowns', and some historians hold that the Hundred Years War with France was a commercial war, fought for the markets of Gascony and Flanders. This is perhaps taking too much the point of view of an age when trade between nations had become far more important than it was in the fourteenth century : there were certainly other factors. The French King was trying to win back English Aquitaine, and Edward felt that he would never succeed in conquering Scotland till he had weakened France. But undoubtedly wool—the 'open door' for our export into Flanders—was an important cause of the war : and wool paid the bill.

This growing importance of our woollen exports led, either in the reign of Henry III, or in that of Edward I, to the formation of a body known as the Merchants of the Staple, who sold wool.

[1] Few of the mediaeval weights and measures can be quoted with absolute confidence, and there were doubtless slight variations in the sack.

[2] Henry of Huntingdon in 1155 gave wool as one of our principal exports.

They also sold hides, leather, and tin ; but wool was so much the most important that the others are usually left out of account. The object was to improve on the system of Fairs [1] that were held at certain places once or twice a year, as at Stourbridge, Leeds, and Winchester, by having Staple towns at which merchants could sell and buy all the year round. The stream of mediaeval commerce was so thin that a steady market could not be relied upon unless the contributory brooks were drawn into a few definite channels. Also a number of merchants going regularly



CALAIS TOWN AND HARBOUR. From an old MS.

to fixed towns could demand privileges and protection, since by their coming they enriched the town.

This arrangement suited the King excellently : he could concentrate his customs officers, more easily collect his dues, and in every way more effectively regulate and control the trade. Thus by Edward III's reign the Merchants of the Staple had been granted the exclusive right of exporting wool. Then Edward

[1] The Great Cloth Fair was held in the churchyard of St. Bartholomew, London, and it dates from Henry II. A narrow street close by St. Bartholomew's in Smithfield is still called 'Cloth Fair', and is one of the oldest parts of London remaining, though most of the old houses have lately been removed.

began making experiments with the Staple towns. For a time there was no town fixed and the merchants could go where they liked. Then the Staple was moved to the Continent and fixed at Bruges that England might get the benefit of the carrying trade—for Edward, as the ship stamped upon his coinage shows,

ENTRANCE TO CLOTH FAIR, ST. BARTHOLOMEW'S CHURCHYARD

had some ideas of 'power by the sea'. But the disturbed state of Flanders and piracy in the Channel led to the Staple being transferred to England, and Newcastle, York, Lincoln, Norwich, Canterbury, Chichester, Winchester, Exeter, and Bristol became staple towns—a list which incidentally shows the chief wool-producing districts in the England of that day. This experiment did not answer, and after ten years the Staple was moved to Calais, where it remained.

The King further commanded that the business done at the Staple towns was to be under the control not of the town authorities but of the Mayor of the Staple. In cases of dispute he was to give decisions according to ' Law Merchant '—a sort of international business code—and he had a jury of assessors on which foreign merchants could sit. The advantage of this was, that cases could be settled each day and each hour of the day, avoiding all the delays of the ordinary law courts, while the foreigner could be sure that his point of view would get a hearing. The foreign merchant was also encouraged in other ways: he was promised that he would not be charged an extortionate rent for his lodgings or held responsible for the debt of a brother alien. He was even allowed to sell retail if he liked.

These privileges granted to the foreigner illustrate very clearly Edward III's whole commercial policy. Up to a certain point the English traders and the King were agreed upon the subject of aliens: unless they came, England would not get the benefit of their goods, nor would she sell so much of her own products for export. But the English merchant wanted the alien to sell his own goods, buy English goods, and be gone as soon as possible: the King thought the longer he stayed, the more trade would increase. So there had been a perpetual struggle between kings and merchants, the latter to limit the aliens' stay to forty days, the former to extend it. Certain bodies of aliens had obtained special privileges: the 'Men of the Emperor' (German merchants) had had a standing in London since the days of King Ethelred; the merchants of the Hansa, or League of Baltic and Rhineland trading towns, had received special privileges from Henry II and had been allotted a special ' House ' in London, known as the Steelyard, by the side of the Thames where Cannon Street Station now stands. But no king had gone so far as Edward III in allowing all aliens to stay as long as they liked, live with whom they pleased, and engage in any trade, wholesale or retail. The reason was partly a political one, to have the foreign merchants on his side in his struggle with France.

The encouragement of the foreign weaver was part of, or an

extension of the same policy. Flemish weavers had followed their princess Matilda to England in William the Conqueror's time: Henry I had settled some of them in South Wales, and Simon de Montfort, far sighted in that as in other things, had urged the importance of the home manufacture of English wool. Edward III turned an experiment into a policy, and the struggle of the Flemish Count with his burghers provided the opportunity. As the war went on, conditions for honest weavers on the Continent became worse and worse, and the number of refugee-immigrants increased. The King welcomed them and stood by them: his popular queen, Philippa of Hainault, made them feel that even in England there was some sort of tie to bind them to their native land. In 1331 one John Kempe settled in Norwich with his servants and apprentices, though he afterwards moved to Westmorland: others settled in York, and in 1337 a general offer of protection was made to all weavers who would come.

Norwich became the chief centre of these foreign weavers, and its 'worsted' cloth (so named from the town where much of it was made) soon became famous. The population of Norwich grew rapidly, and it was soon more populous than it was at the beginning of the nineteenth century. These weavers seem to have been independent folk. As part of his policy of regulating the woollen industry, the King appointed an official called an 'aulnager',[1] whose duty it was to see that the cloth was of standard length and quality. The weavers seem to have disliked the poor man himself almost as much as they objected to his fees; they refused to make cloth of a given length, and won their point. The attempt to get uniformity was given up, and the aulnager's duties reduced to certifying the length, whatever it might be, and the quality.

They were equally jealous of the honour of their craft: we find them in 1362 petitioning the Mayor and Aldermen of London that they may be allowed to appoint 'three good folk of the weavers alien' to rule their trade; that no alien be allowed to work before he has been examined by the masters of the said

[1] From *ulna*, meaning an ell = 45 inches

trade to see if he knows his trade or not ; and that standard wages and hours should be observed, in particular that no one ' be so daring as to work at the trade by night '. They seem to have kept themselves to themselves a good deal, for in spite of the royal protection they had a hard time of it. During the war with France they were under a good deal of suspicion as possible spies ; and at the best of times the attitude of the Englishman towards foreigners is not exactly genial. The policy of the King in encouraging them was not a popular one. It might be for the good of England as a whole ; it might mean in the future a great development of industry. All the local trader could see in it at the time was an encouragement given to a rival (and a foreigner at that) ; and with grim recollection of past hardships of his own in foreign parts, he determined ' to get a bit of his own back '. However, English merchants did realize, at the back of their minds, that the settlement of these immigrants helped the trade of a town, for when Boston was added to the list of Staple towns given above, and an attraction was thus offered to foreigners to settle there, the citizens of Lincoln grew jealous and bitterly complained that their trade would be ruined.

No doubt some of Edward's policy was just opportunism : in his war with France it was natural enough to ally himself with the rebellious Flemings. But behind it lay something more. Both Edward III and his grandfather were feeling their way towards a national policy for England's commerce : the volume of the trade of England as a whole was the important thing, not how much any particular town could selfishly grasp for itself. In this national policy, the encouragement of the home manufacture of the finer cloths, under the tuition of the alien craftsmen, had the far-reaching result of laying the foundation of England's woollen industry. That in the Peace of Bretigny in 1360 Edward left Flanders in the lurch, and that in 1364 the Drapers' Company which dealt in cloth received its first charter, are facts not without significance. England would manufacture her own cloth.

CHAPTER II

'ENGLAND'S TREASURE IN FOREIGN TRADE'

HISTORY is written in stones as well as in books, and a trustworthy sign of the prosperity of a people is to be found in its buildings. If men are able and ready to spend money freely in erecting beautiful churches, public buildings, and houses, it is usually safe to assume that they are prosperous. Magnificent buildings, especially magnificent churches,[1] sprang up in many parts of England in the thirteenth, fourteenth, and fifteenth centuries, and it may be taken as certain that it was the flourishing state of the wool trade that made this building possible—for it took place just in those parts of a country where, from other evidence, it is known that the wool trade was most prosperous. Indeed, it has been said that the finest specimens of the type of Architecture known as 'Perpendicular' in England are to be found, almost without exception, in those areas where the clothing trade was carried on.

The Perpendicular style of Architecture is distinguished by the straight line, both perpendicular and horizontal, in its windows, the splendour of its roofing, its use of panelling, the frequent occurrence of conventional forms of the vine and the oak in its carved ornamentations, and by the beauty of its towers and spires. Some of the best known Perpendicular parish churches are those of Wymondham, Terrington St. Clements, Lynn, and Snettisham in Norfolk; Lavenham, Southwold, and Long Melford in Suffolk; Boston in Lincolnshire; St. Michael's at Coventry; Rotherham in Yorkshire; Gloucester Cathedral, where in the rebuilding of the chancel the perpendicular style is said to have originated;[2] St. Mary Redcliffe, a lasting monument to the great family of the Canynges, who were cloth-merchants, in Bristol; and St. Mary's at Taunton. Norwich

[1] It will, of course, be understood that most of these were rebuildings of older foundations.

[2] Cf. Thomas Hardy's poem 'The Abbey Mason'

NORTHLEACH CHURCH, in the Cotswolds, is famous for its brasses of Woolstaplers.

The one shown above is that of John Fortey, rebuilder of the Nave, dated 1458. The feet rest on a wool pack and sheep, and Fortey's merchant's mark occurs six times on the border, and also at the end of his girdle. The merchant's mark consists of his initials J.F. with a cross and banner between them standing on a monogram of the letters A.D. (? = Agnus Dei), inscribed in a wreath of vine or ivy. Much of the inscription round the brass has been destroyed, but the couplet at the bottom is plain :

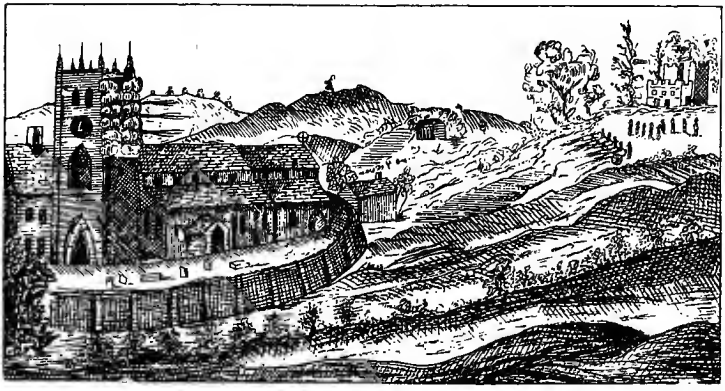
' Respice quid prodest presentis tem-
poris evum
Omne quod est nichil est preter
amare Deum.'

has some fine examples of Perpendicular roofs at St. Peter's, St. Andrew's, and St. Mary's, as has Essex at Thaxted and Saffron Walden. The south aisle of Cullompton Church in Devon is decorated with carvings of the instruments used in the wool trade. Gloucestershire can show the great church at Cirencester, with its three-storied south porch, in the upper rooms of which the gilds used to hold their meetings ; the Perpendicular church of Northleach, with no less than seven brasses of dates between 1400 and 1525 to ' woolmen ', including the brass to John Fortey, who built the church ; Fairford Church[1] with its magnificent

[1] Built by John Tame, clothier, who died in 1500, and completed by his son, who was knighted by Henry VIII when he visited Fairford and saw the splendid windows. The windows are now believed to have been made in England by workmen from the Low Countries ; but there is a picturesque legend that they were made in the Netherlands and intended for the Vatican, were captured at sea by one of John Tame's ships, and brought to Fairford, where he built a church to contain them.

DUNSTER. The old yarn market

stained-glass windows ; and the church at Chipping Campden, rebuilt by William Greville, ' flower of wool-merchants,' who died in 1401 and is buried in the chancel with his wife. Sir Richard Whittington, the greatest merchant of the fourteenth century, came from Gloucestershire. Wells, with its thirteenth-century cathedral, stands at the southern base of the grazing lands of the Mendips and the woollen industry that grew up at Frome and the neighbouring villages. Defoe tells us that the Cathedral of



BRADFORD PARISH CHURCH TOWER hung with Wool Packs during the Civil War (1642). From a scarce old print

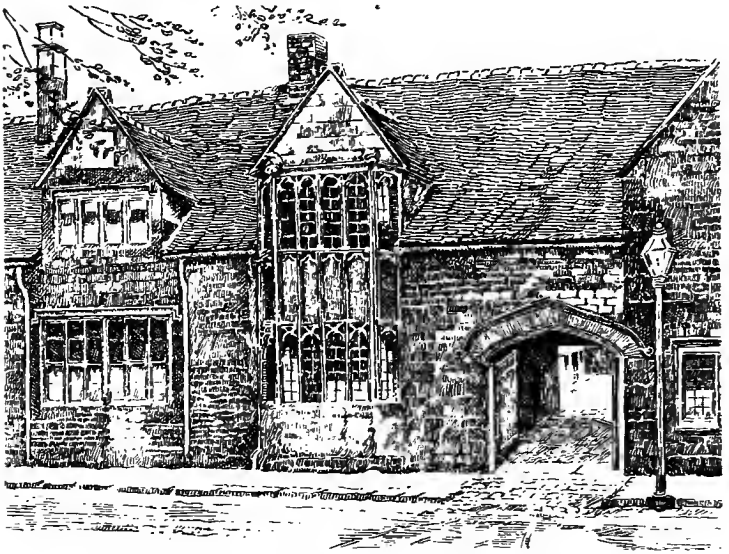
Salisbury—far famed for its ' Salisbury Whites '—was popularly believed to stand on a foundation of woolpacks. Further west in Somerset little Dunster's picturesque old yarn market, with its high-pitched tiled roof, supplies the reason for the stately beauty of the neighbouring church. Many fine churches stand at the openings of the valleys leading to the waterways of the Thames, and so to the Continent. The wealth of the Craven pastures in Yorkshire is testified by the great church at Skipton and the church at Kildwick—the ' lang church of Craven '. Bradford parish church was begun in its present form in 1408, and its tower —so gallantly and suitably protected during the Civil War from

the Earl of Newcastle's cannon by wool packs hung upon it—completed a century later. The present buildings of Halifax parish church are of the same date as Bradford. This church is almost unique in possessing a chancel as long as its nave. The chancel was the responsibility of the rector and the priests, while the nave was the concern of the people of the parish. Between 1455 and 1480 the chancel was made so magnificent that the

SHIBDEN HALL, NEAR HALIFAX, which has been inhabited by the family of John Lister, Esq., since Samuel Lister, clothier, came into possession in 1613

weavers and clothiers, not to be outdone, had to make the western part of the church worthy of it. They did not make a clerestory (a set of windows above the nave-arches) as had been done in the chancel, but they built one of the most stately towers to be found in the West Riding. A legend grew up around this tower that, so long as it overtopped every other building in Halifax, Halifax would hold the pre-eminence in the West Riding cloth trade. The legend was fulfilled—for not until the coming of machinery and mill-chimneys was it outstripped by its rivals.

But churches are not the only buildings that remain to bear witness to the prosperity of the wool industry in these centuries. Wool supplied a large portion of the revenue, and so provided the money for the great fortresses Edward I built to control Wales, and for many other royal buildings. Of private houses Shibden (=sheep-dene or sheep valley) Hall, near Halifax, built



CHIPPING CAMPDEN. The house of William Greville

of massive oak beams on a stone foundation, is a magnificent example—many timbered houses are still to be found scattered over the countryside. But stone houses were also being built, while in many parts of the country wooden barns were beginning to give place to stone ones.[1] The beautiful house of William Greville, the wool-stapler just mentioned, may still be seen at Chipping Campden with windows whose stone tracery would

[1] A good example is the 'Early English Barn', 180 feet long, 30 feet broad, with transepts, of date 1300 to 1350, belonging to Barton Farm, Bradford-on-Avon.

grace the hall of an Oxford college. Opposite still stands the Wool-staplers' Hall, less ornate but no less noble. Stokesay Castle in Shropshire, one of the show places of England, was built in the thirteenth century by a wealthy cloth-merchant, Lawrence of Ludlow. At Steeple Ashton in Wiltshire may be seen a street of houses used by the wool-merchants, while Salisbury still points with pride to the hall of John Hall, the wool-stapler.

The ruined abbeys and priories scattered over the face of the countryside tell the same tale as the churches and the domestic buildings. Some of their 'sheep houses' still remain, like the

EARLY ENGLISH BARN. Barton Farm, Bradford-on-Avon

Sheep House of Llanthony Priory on Robin's Wood Hill, Gloucester, around which the monks in charge of the sheep gathered their flocks when floods threatened the low-lying fields. The monks naturally sent their wool to Italy as well as to Flanders, and two lists have survived, one Florentine, dated 1315, and one Flemish, of a date rather earlier, in which are to be found the names of nearly two hundred abbeys in England and Scotland that supplied wool to the Flemish and Florentine markets.

Of the English counties figuring in the list Bedford has four abbeys, including Woburn and Dunstable, Berkshire only the Benedictine house of Abingdon. Buckingham and Cheshire have four apiece, Cambridgeshire and Derbyshire three. Devon has four, Essex five. Gloucestershire has Flaxley (Cistercian)

and Winchcombe (Benedictine). The four Hampshire abbeys are Beaulieu, Netley, Quarr, and Titchfield, of which the first three were Cistercian. Kent, Huntingdon, Monmouth, Norfolk, Warwickshire, and Worcestershire have three each; Middlesex, Merioneth, Wiltshire, Glamorgan, Cumberland, and Northumberland two; Leicestershire and Oxfordshire each five. But by far the longest lists are those of Lincolnshire, with thirty-seven, and Yorkshire with thirty-six.

Throughout the list the predominance of the Cistercian houses is very noticeable. Indeed the debt which the wool industry owes to the monks, and particularly to the Cistercians, is not always realized. The Cistercian Order is famed for its love of lonely places—in contradistinction from the Benedictine Order, of which it was an offshoot, which preferred to establish its houses near towns—and for the great respect in which it held all honest, necessary manual work. *Laborare est orare* was not only its belief but its practice.

JOHN HALL
The Wool-stapler

The real founder of the Order was an Englishman, Stephen Harding of Sherborne, who became third Abbot of Citeaux in Burgundy in 1109. The various houses were kept in close touch with one another by a system of mutual visiting. The object of the Cistercian rules—known as the Chart of Charity—was to establish a bond of love throughout the Order. The simplicity that led them to prefer the lonely places and the great spaces, and to pay such honour to manual work, extended to their rule of life and even to their building and ritual, both of which were distinguished by a certain austerity. If Stephen Harding was the real founder of the Order, the marvellous manner in which it spread between the years 1113 and 1152 was due to Bernard, Abbot of the newly founded House of Clairvaux in Champagne

and preacher of the Second Crusade. Bernard was a man of very unusual force of character and unswerving honesty, and, though—or perhaps because—he refused all preferments and dignities, his name soon became famous throughout Europe. Cistercian houses sprang up in various parts of England. Among the best known were Waverley in Surrey, Furness and Whalley in Lancashire, Flaxley and Hailes in Gloucestershire, Cleve in Somerset, Tintern in Monmouthshire.

But the great home of the Cistercians in England was Yorkshire, whose vastness and solitude specially appealed to them. Here they established no fewer than eight houses—Fountains, near Ripon; Rievaulx and Byland, between which lay Helmsley; Jervaulx, near Masham; Sawley, in Craven; Barnoldswick, which they soon removed to Kirkstall, near Leeds; Roche, near Doncaster, and Meaux, near Beverley.

It has been said, somewhat unkindly, of the Cistercians that they were better farmers than monks. The aims of the Order were certainly twofold—Worship in the church and Work in the fields. But neither of these objects was neglected for the sake of the other. Besides the monks proper, most of whom were in priest's or deacon's orders, the Cistercians had a large number of lay brothers. So important in the eyes of the Founders was work in the fields or the mines or the workshops, that education in the sense of mere book-learning did not play an important part in Cistercian life. Both monks and lay brothers worked with their hands. But the lay brothers did more than the monks, who had other duties, and they were allowed extra rations in consequence.

It is not too much to say that Yorkshire was reclaimed from the devastation to which William the Conqueror had subjected it by the Cistercians. It was they who drained the swamps and marshes, cleared the forests, provided water supplies, repaired and made roads, and improved methods of tillage and the breeds of sheep and horses. We are inclined to say, unthinkingly, to-day, 'What an eye these monks had for a site and what perfect spots they always chose for their Abbeys!' The truth is

different. These spots were not always fertile and smiling. They were given by landowners who, however pious, were human and probably did not part with the best of their land. It was the skill and industry of the monks, who cleared the ground like settlers in a new colony, that have made the sites of the old abbeys vales of peace and plenty. In the days when the Cistercians came to Yorkshire valley bottoms were generally considered too densely wooded for farmsteads. It was the higher ground—not the bleak moors of the uplands, but the land above the denser woods—that the ordinary inhabitants first developed, and where the oldest farms and hamlets are to be found. The monks were the first, by clearing the trees, to make use of the greater fertility of the valleys and build by the side of the streams.

It was, however, in the rearing of sheep that the genius of the Cistercians especially lay, and wool comprised a large proportion of their wealth. Fountains Abbey had a famous shearing place at Kilnsey, above Grassington in Wharfedale. Byland Abbey possessed rights of pasturage in many parishes; the right to pasture 600 sheep with their lambs at Kilburn, 400 at Thurkleby. Jervaulx Abbey was almost as renowned for its sheep as for its horses. In 1381 the wool from Sawley, which lay at the head of the Craven district, was fetching 2*s*. a stone. In 1295 Kirkstall won a lawsuit against the Crown over a sum of 160 marks, which was paid in advance by some traders in Lucca for the right to purchase all the Kirkstall wool. The monks proved that the traders and not the monastery had broken the contract. Meaux in 1280—about the date of the Flemish list quoted above—is said to have possessed 11,000 sheep.

In estimating the influence of the monks upon industry and farming, historians are too apt to let their own religious feelings govern their judgement. In their best days the monks farmed most of their land themselves, and afterwards, when they let it out, they were often good and indulgent landlords. Their labour possessed more continuity than that of an ordinary land-owner. An Order did not die. There was no heir to reverse the work of his predecessor. Nor were monks liable to be called

away so many days in the year for military service. Moreover, isolated though many of them were, the abbeys were bureaux of information. Messengers were continually passing backwards and forwards to other abbeys as well as to Rome, and hospitality was one of the great objects for which the Monastic Orders existed, and was always faithfully performed. No one, high or low, was turned away, and the coming and going of the guests was one of the most ordinary features of daily life. It was from this constant exercise of hospitality that the monks were able to gather the news that made them such valuable chroniclers through the Middle Ages. Thus gathering information from abroad as well as at home, from their journeys as well as their guests, it is impossible to doubt that they did much in advancing agriculture, cattle rearing, and industry. The presence of a religious house must have stimulated the industrial life of the whole countryside. As time went on the rearing of sheep grew so profitable that it became a positive danger to agriculture. Even as early as 1195 Cistercian wool paid a large part of Richard Cœur-de-Lion's ransom, the money for which was raised by Hubert Walter, who among his many dignities held not inappropriately the living of Halifax, though there is no record of his ever having visited his parish. The sheep-rearing did not grow less, for fully two centuries later More included 'certayn Abbottes' in the blame he meted out in his *Utopia* to all those who allowed their sheep to eat up the land that should have been ploughed for corn. In this the monasteries only proved that they were thoroughly national, and the Pilgrimage of Grace in 1537 is sufficient proof that the dissolution of the great Cistercian houses of Yorkshire was unpopular; and possibly, if Parliament in Henry VIII's day had represented the people instead of mainly the classes that hoped to profit from it, the King would not have found so ready an acquiescence in his policy.

All through the thirteenth and fourteenth centuries the wool trade flourished and grew. It provided England with buildings whose beauty is still a source of national pride, and it paid for the long Hundred Years' War against France. It seems incredible

at first sight that the Black Death, which reached England in 1349 and carried off a third of her population [1], should not have put an end to all this prosperity. It stopped the war with France for six years and made children so precious for a generation that, as we learn from Piers Plowman, there was a marked tendency to spoil them, and well-meaning people busied themselves in reminding parents of the precepts of Solomon.

The first result of the loss of a third of the labourers was of course to make labour very much more valuable and sought after. This should have been a good thing for the labourer. But Parliament tried by various Statutes to maintain 'pre-plague' conditions, and to fix wages. It was shortsighted no doubt. One might as well have tried to stop the course of the Thames by laying a dam across it. But it was natural. The members were mostly landlords, who could hardly help viewing the situation from their own point of view. The peasants were not represented. The times were the Middle Ages, when it was considered just and necessary to fix prices. If prices were fixed, why should not wages be fixed too? Parliament is less to be blamed for passing the Statutes of Labourers than for the penalties it decreed against those who broke them.

Up to the time of the Black Death land had been held on a system which was known as the Manorial System. The system had grown of itself and was governed by ancient custom—the 'custom of the manor'—which, since in different ways it protected everybody, lord and tenant alike, no one was willing to challenge. Under these ancient customs the tenants, freeholders, and villeins (that is, persons who were bound to the estate and not allowed to move away from it, but who equally lived by it and while they conformed to the customs could seldom be turned out), paid for their holdings largely by service and 'in kind'; that is to say they did not pay the lord of the manor a money rent, but did so many days' work a week on his land, carted for him, and gave him so many eggs and chickens a year. The

[1] There are widely differing estimates of the mortality caused by the Black Death. One-third is probably a moderate estimate.

tenants, besides their holdings, had the right to feed their sheep, cattle, and pigs on the commonable waste, or common land of the manor. Times had changed since this ancient system grew up, and it was becoming rather uncomfortable and out of date. The villeins in particular were steadily winning their freedom, and the payment of rent by service was becoming both unprofitable and irksome. The system was in fact already beginning to decay; but in the ordinary course of events it would have crumbled slowly. The Black Death made it break up very rapidly; for the loss of at least one-third of the number of tenants all over the country suddenly made it unworkable.

Even if the tenants and villeins had agreed to work for the wages fixed by Parliament, it would not have been possible or desirable to cultivate as much land as had been cultivated before —for there were now only 200 men where there had been 300 to do it and to eat the produce. This did not mean national ruin, or even a spell of national poverty, because, fortunately for the landowners but unfortunately for the tenants, the wool trade showed another way in which the land could be used. It could be turned very profitably into sheep pastures, where a few shepherds would be able to look after as large an area as it had taken fifty or sixty labourers to work before. Thus began the enclosures for sheep farming which turned many small-holders and villeins off the land their fathers had occupied for centuries, and of which, by the unwritten (occasionally written) 'custom of the manor', they ought not to have been dispossessed. First to be enclosed was the arable land left uncultivated and the equivalent part of the commonable waste. This probably involved few hardships. But when still more was enclosed, though the immediate prosperity of the country was saved, the poorest classes suffered as they do in all social upheavals, for they stand in the most disadvantageous position to make bargains for themselves. Bitter feelings arose. The landlords were aggrieved that the peasants would not give the old services—now of course far more valuable—and asked for money payments and higher wages. The peasants not only resented the pressure

put upon them, but it is pretty certain that the enclosing was often done unfairly, and that large parts of the 'commonable waste', where the peasants kept their sheep and cattle, were taken. Rebellions took place, Wat Tyler's and John Ball's in the south, and John Wraw's and Geoffrey Litster's (Litster means a dyer) in Norfolk and Suffolk; and very well-organized rebellions they were. Tyler's demands, that serfdom should be done away with, all labour services abolished, and all markets made free, so that every one might buy and sell as he chose, show clearly enough what the grievances were. In this first struggle between Capital and Labour the parish priests come out rather well, for two of the four leaders, Ball and Wraw, were in Holy Orders.

The boy king Richard II made promises of redress. Parliament broke them and nothing was done. Seven years after the revolts—in 1388—an Act was passed forbidding children who had worked on the land till the age of twelve to take up an industry. If we may trust a poet of the day—an imitator of William Langland, whose name is unknown—the lot of the peasant at the end of the fourteenth century was a dreary one indeed.

His coat of the cloth that is called carry-marry;
His hood full of holes with his hair sticking through them,

and so on. His toes started out of the ends of his clumsy shoes as he waded through the mud that rose over his ankles. His wife walked beside him with bare bleeding feet, goading the oxen, which were so thin and feeble that you could count their ribs. And at the end of the acre lay the baby and two children, all crying one cry, a sad note of care.

The depression in agriculture did not, however, affect the whole of the national life. Chaucer, another contemporary poet, paints the other side of the picture. There is nothing downhearted about the England Chaucer saw. If England had suffered by the Black Death, the Continent was equally hard hit. And the Continent had not the wool trade to fall back upon. English wool-growers were prospering. The rivalry of the Spanish wool-growers had not yet begun. In the newly planted cloth

industry the immigration of aliens made up, to a small extent, for the ravages of the pestilence. The enclosures had actually increased the extent of the grazing areas, and England found herself in the unique position of having an industry that enabled her to increase her wealth with a reduced number of workers. This prosperity had, however, become one-sided. If there was not less wealth, fewer hands gathered it. The growth of a pauper class had begun, and Edward III's reign, which had opened so gloriously, ended in comparative gloom.

But the ' boom ' in wool went on, and the cloth industry that Edward took such pains to plant had grown, within fifty years of his death, to be a very important thing. If the customs on the export of raw wool declined it was only because cloth as well as wool had now become an article of export. Norwich required eight wardens to supervise the worsteds made in Norfolk, Suffolk, and Cambridge. There was another big centre of the industry in Somerset, Dorset, Bristol, and Gloucestershire ; another in the West Riding ; another in Essex. The dyers of Coventry were becoming a powerful body. The beginnings of the ' Domestic System '—in which clothiers handed out wool to spinners, carders, and weavers to work up in their own homes—were to be seen in the West of England. A Statute of Edward IV gives a clear picture of the cloth manufacture in the fifteenth century. It gives, besides the regulations about the sizes of cloths and the manner of sealing, authority for appointing enough officials to see that the regulations were enforced. This meant that local supervision was no longer proving effective, or sufficient for the State's purpose, and that Government supervision was to take its place. Very stringent regulations were made about the packing of wool. No grower of wool was to mix earth, hair, sand, or other rubbish with his wool, and no wool was to be packed outside the borders of the county, or in Yorkshire and Lincolnshire the Riding, in which it was grown. Like the Chancellor in *Iolanthe*, the fifteenth-century merchant was much afraid of finding thorns in his woolsack. The commissioners at Calais had to make reports to the Treasurer and Barons of the Exchequer

upon the wool brought to Calais, which provided a useful check upon the reports of the Customs Officers in England. Wool taken to Calais in any year and unsold by April 6th was classed as 'old wool'—for it would have been shorn the previous summer. In the autumn and winter there was no shearing. The winter shipments were not wool, but 'fells', or skins with the wool on them. The export of fells was considerable, for, until the introduction of root-crops in Hanoverian times, cattle could not be kept through the winter and a great slaughter always took place before Martinmas; moreover, sheep-skins had considerable value: they were steeped in lime and turned into parchment.

A lively picture of the wool trade in the time of Edward IV is given in the Cely letters. The Celys were a family of merchants of the Staple, with head-quarters in London, who traded with Calais. They dealt largely in Cotswold wool, and young Richard Cely, the son who did the buying in England, constantly rode down to Gloucestershire to select Cotswold wool to ship to his brother 'Jorge' at Calais. He took his hawk with him to give him sport on the way and had more than one poaching adventure. He turned his journeys to good account, for he discovered the heiress to whom he paid his suit in the daughter of one of his clients at Northleach.

The 'Lombardys' were also great buyers of Cotswold wool. The King of Portugal asked leave to obtain sixty sacks of it to make cloth of gold, and in 1464 Edward IV sent Henry IV of Castile a present of Cotswold sheep, five rams and twenty ewes, which are—according to tradition—supposed to have improved the breed of the Spanish Merino sheep. A jingle of Edward's reign has come down to us, commemorating the importance attached to the cloth trade:

> For every man must have meat, drink and cloth;
> There is neither pope, emperor nor king,
> Bishop, cardinal, or any man living,
> Of what condition, or what manner degree,
> During their living they must have things three,
> Meat, drink, and cloth.

The Wars of the Roses, though much of the fighting took place in two centres of the wool trade, Yorkshire and Gloucestershire, do not seem to have checked it any more than the Black Death had done. It is possible that historians have much exaggerated the size of the armies engaged. Two eye-witnesses, the French historian Philip de Commines and the English Judge Sir John Fortescue, contrast the prosperous condition of England with the misery of France at this time. It is significant that no town stood a siege during the wars, and that no pitched battle was fought south of the Thames, that is to say, in that portion of England which was then by far the most thickly populated. Towns on the routes of march, and certain districts, must have suffered severely, and some summers it can hardly have been safe for cloth manufacturers to send their goods to the fairs. But the ordinary business of the country was not seriously interrupted. The Law Courts went on sitting at Westminster. The Judges continued going on circuit. All the same, the nation grew so heartily sick of the strife that it was ready to welcome any ruler who had a strong enough right arm to put an end to it.

There was another direction in which English commerce was making great strides in the fourteenth and fifteenth centuries. Up to the time of Edward III most of the carrying trade had been in the hands of foreigners. England was, however, already claiming the ' sovereignty of the Four Seas '—that is, the spaces of water from Norway to Cape Finisterre—as her right. Chaucer's shipman

> . . knew well all the havens as they were
> From Gothland to the Cape of Finisterre,
> And every creek in Britain and in Spain.

Edward III's designs for a war against France made him realize the importance of having a strong navy. There was indeed bitter need for action. Froissart, the gallant Frenchman who wandered everywhere and served many a noble master and never wrote a dull page about any of them, relates how in 1339—on the eve of the war with France—Philip, the French king, fortified his navy with a great retinue of Genoese, Normans, Bretons,

and Picards who 'did that winter great damage to the realm of England: sometime they came to Dover, Sandwich, Winchelsea, Hastings, and Rye, and did much sorrow to the Englishmen, for they were a great number, as a forty thousand men. There was none that could issue out of England but they were robbed, taken or slain; so they won great pillage, and specially they won a great ship called the *Christofer*, laden with wools, as she was going into Flanders, the which ship had cost the King of England much money, and all they that were taken within the ship were slain or drowned; of the which conquest the Frenchmen were right joyous.'

Dover, Sandwich, Hastings, Winchelsea, and Rye—with Hythe and Romney—were the very head-quarters of the Navy of the Cinque Ports, the only navy England had, which must have added gall to the insult. The next year (1340) Edward got together a fleet of some 200 ships and defeated the French fleet at the bloody battle of Sluys, where he himself commanded the cog *Thomas*; and ten years later he gave a wholesome lesson to the Spaniards and Basques, who had plundered ten English merchantmen, by beating them soundly in the battle of Lespagnols-sur-mer (Spaniards on the Sea), off Winchelsea. The story of this battle should be read in Froissart. He tells how John of Gaunt, then a boy of ten, refused to be left on shore with his mother; how the great Sir John Chandos stood on the forecastle and sang the latest love-song as he waited for the battle to begin; how the English vessels looked like mere boats by the side of the hulking Spaniards; and how the King and the Black Prince each fought his ship until it sank under him.

These two victories, securing as they did the mastery of the sea for some years, go far to explain the great commercial success of the reign. For commercial prosperity has always gone hand in hand with naval supremacy in the history of England. Edward III styled himself 'the Avenger of Merchants' on the gold coin struck to commemorate the defeat of the Spaniards on the sea; and he was justified. He also tried to give merchants protection at sea by letters of safe-conduct, and by a system of convoys.

But before the end of the reign the command of the Channel had been lost and the French were again busy burning our seaports ; they sailed up the Thames and burnt Gravesend and beat the English fleet off Rochelle. Scottish pirates were harrying the east coast unchecked in Richard II's reign till they were defeated by a London merchant named John Philpot. Indeed, the piracy in the Channel and on the North Sea was such that it is astonishing that merchants were ready to face the risks at all, except that it was hard to detect a pirate and there were probably as many amateurs as professionals. The pirate of

GOLD COIN OF EDWARD III, struck to commemorate the victory of Sluys, 1340

Monday might sail into a port with wares to sell on Tuesday as a perfectly respectable merchant.

The most famous band of pirates in the fourteenth century were the Vitalians, or ' Victual Brothers '. After a long and successful career this band was broken up in 1402 in a great fight off Heligoland. But that did not end the matter. The survivors scattered and formed new bands. In the Channel the French continued to make life interesting, but the English seem to have felt equal to them, for when, in 1404, they appeared off the Isle of Wight they were courteously asked to land and promised rest and refreshment if they would thereafter ' vouchsafe the delights of a pitched battle '. In 1406 Henry IV tried

to put the responsibility of dealing with pirates still further on to the shoulders of the merchants, who were to keep the sea for eighteen months and to receive in return the whole of Tunnage and Poundage and a quarter of the valuable wool duties. But this proved too costly. Henry V, like Edward III, had a war with France in his mind, and revived the Cinque Ports navy. But he did so largely by impounding merchant shipping, a method that was naturally somewhat upsetting to the growing commerce of the country.

The Wars of the Roses caused naval affairs to fall into neglect, and during Henry VI's reign the English coasts were harried by bands of sea-rovers. Ports were burned and London and Norwich had to be protected by booms. The Paston Letters (1440–85) show that the pirates, when they wanted recruits or hostages for ransom, anticipated the methods of the press-gang, and gaily carried off men ' walking by the sea side '.

Methods of warfare were fairly direct. Chaucer was no doubt only painting the average sailor of the merchant service in his portrait of the Shipman :

> Of nyce conscience took he no keepe ;
> If that he fought and had the higher hond,
> By water he sent them home to every lond.

That is to say he made them walk the plank, in the approved skull and cross-bones fashion.

The pirate menace long remained to harass trade. In the Ballad of Sir Andrew Barton King Henry VIII welcomes eighty merchants of London :

> ' O yee are welcome, rich merchants ;
> Good saylors, welcome unto mee.'
> They swore by the rood they were saylors good
> But rich merchants they cold not bee.
> ' To France nor Flanders dare we pass :
> Nor Bordeaux voyage dare we fare ;
> And all for a rover that lyes on the seas
> Who robbs us of our merchant ware.'

Piracy continued to make trade a highly speculative undertaking all through the sixteenth century. Shylock did not feel

that wealth that was upon the sea was sufficient security for a loan. He told Bassanio that Antonio's means were ' in supposition : he hath an argosy bound to Tripolis, another to the Indies ; I understand, moreover, upon the Rialto (which for our purpose we can read as London Bridge), he hath a third at Mexico, a fourth for England—and other ventures he hath squandered abroad. But ships are but boards, sailors but men : there be land-rats and water-rats, land-thieves and water-thieves,—I mean pirates . . .'

The English merchants were quite ready to face pirates, and they were fairly expert smugglers. There was a regular word for smuggling wool out of the country by night—the picturesque verb ' to owl '—which is used in the Paston Letters. But they were growing more and more restive against the claims and privileges of the Hanse merchants, a body of German and Prussian merchants, comprising at one time as many as ninety towns in North Germany and on the Baltic. These people would not allow Englishmen the equal rights on the Baltic that were understood to be the condition of their own privileges in England. The footing of the Hansards in England was of four hundred years' standing, and they possessed well-established warehouses or centres in London and other towns known as ' Steelyards '. But during the fourteenth century their power was undermined by the long struggle which they waged with the Danes, and from which they came off second best.

Meanwhile the export of half-manufactured English cloth to the Low Countries, where the secret of the finishing processes were still jealously guarded, had been growing up all through the thirteenth and fourteenth centuries. From the outset this trade seems to have been in the hands of Englishmen, who boldly pushed their rights and obtained fixed marts, first at Bruges and then at Antwerp. These merchants formed themselves into a company and were known as the Merchant Adventurers. The earliest charter licensing their trade that has been preserved is dated 1407 ; but they were undoubtedly in existence earlier. The Merchant Adventurers soon ceased to limit their energies to the Low Countries and began to push their wares

in Denmark and Scandinavia. They thus found themselves in sympathy with the Danes in their struggle against the Hansards,[1] and, as soon as the Danes were victorious, followed up the advantage thus opened to them. They met with unlooked-for opposition from Edward IV, whom the Hansards had helped in his struggle with Warwick the King-maker, and who had to repay his debt to them by a fresh grant of privileges. But this grant came too late to help the Hanse merchants materially. The Danes and the Merchant Adventurers had already wrested from them the monopoly of the Baltic, and their fall was rapid. Before the end of the fifteenth century they had ceased to count, in another fifty years the Steelyards were deserted, and after 1578 England knew them no more. The carrying trade was passing surely and steadily into the hands of Englishmen.

Thus the end of the fifteenth century saw England largely a nation of sheep-farmers and cloth-makers. The wool trade had broken up the old manorial system of land-tenure, and was changing the face of the country-side, especially in the east, south-east, and west. A class of people who made their living partly by cultivating a few acres and partly by spinning and weaving had begun to grow up. A pauper class, of beggars and vagabonds, who could find no work to do, was also growing up. The men of the sea-coast towns, stimulated by the merchants and by dislike of the foreigner, were becoming a race of mariners and shipbuilders, and beginning to shoulder the carrying trade. The use of money had become more common. Commerce had expanded so much that the local control of the Gilds was no longer enough, and the State had stepped in and regulated trade at home and interested itself in markets abroad. All these results were due to the great boom in wool. If it is true to-day to say that 'our civilization is founded on coal', it might be said of the thirteenth, fourteenth, and fifteenth centuries, with even more reason, that their civilization was founded on wool.

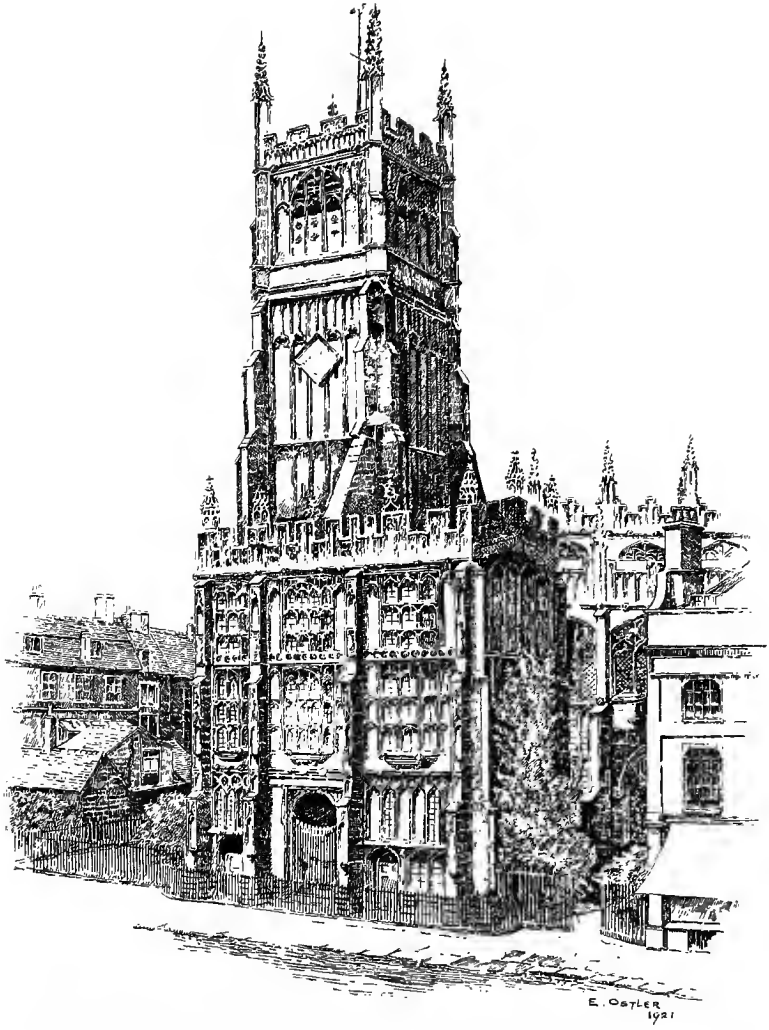
[1] For mutual complaints between the English and the Hansards and list of injuries inflicted, see Hakluyt's *Voyages* (Everyman Edition), vol. i, pp. 150 seq.

CHAPTER III

THE MEDIAEVAL GILD

TO-DAY we take it as a matter of course that trade should be world-wide. Lancashire cottons, Yorkshire woollens, Sheffield steel go to all parts of the globe; each country produces the goods for which it is best suited. But this highly-specialized world trade is, comparatively speaking, of quite recent growth. It was not till about the seventeenth century that even parts of England began to specialize, and to produce for all England those goods for which the particular district was best adapted. Before that, during the Middle Ages, each little district produced and manufactured for itself practically everything that it required. Trade between district and district, and still more between country and country, was difficult and only took place along certain definite regulated channels in goods which either could not be produced at home, such as wine or pepper, or which could not be produced in sufficient quantity, such as the raw wool which England exported to the weavers of Flanders.

Each of these little districts was centred round a town—the market town. This had generally started as a place of refuge, where, under the strong walls of a castle or an abbey, the men of the district could find safety when a Danish raid was sweeping across some part of England. When the worst of these troublous times were past, those strongholds which were only of military importance fell gradually into insignificance. But often a fort is placed to command a road or a pass, or a ford across a river—places by which all travellers must pass. So the fort becomes naturally a trading centre also, and the castle with its cluster of huts develops into the busy town. Thither come the men from the upland manors, with their wool and their hides, their corn and their cheese, to take in exchange worked iron and leather goods, and, if they are well-to-do, occasional luxuries, fine cloth from Italy, wine from France, spices from the Far East.



CIRENCESTER. Three-storied South Porch, in the upper rooms of which the gilds used to hold their meetings.

But except for these occasional 'foreigners', coming to the great periodic fairs, towns had little to do with each other. There were practically no roads, except the remnants of the old Roman highways—and they had been little repaired since the Romans left. There was very little wheeled traffic: what there was, moved slowly in heavy clumsy springless carts. There was constant danger from robbers and lawless men, such as Robin Hood: bridges were few and often in such bad repair that one could see the water below through the holes. So each town kept itself to itself, knew little and cared less about the 'foreigners' of the next town. Disputes about land, squabbles about gild rights, the building of its cathedral and the organizing of its pageants and mystery plays: these were excitement enough. And it thanked Heaven that the King left it unvisited and at peace.

But the town was more than the mere trading centre of the district: the interests of town and country were, especially at first, closely bound together. The folk of the town had their lands without the city wall: the great landowners had to have their 'town house' and take their share in common measures for the town's defence: for men still thought of the town as a place of refuge—not entirely without reason. But the enemy was coming to be a new one, especially in the towns on the Continent. When the first beginnings of the town had huddled round the lord's castle, men had been glad of his strong arm to protect them against their enemies without. The town grew, trade increased, dangers from without grew less: the lord cast covetous eyes on the town's wealth which had come to them, he said, thanks to his protection. But the townsfolk thought otherwise and wished to free themselves from his control. So about the twelfth century there were bitter struggles in many of the towns in France, Germany, and Italy. In England there was the same desire in the towns for independence: but there was little of the bitterness of the Continental struggle—the towns were smaller, the King's rule stronger, and the lords had less extensive powers.

This movement became much more important under Henry II, whose strong rule made trade prosper The towns began to ask for 'Charters' from the King—grants of special privileges. Few got them: the King did not mean to part with his power. But when the Crusades began it was a different matter, and Richard Lion-heart was not far-seeing like his father. King and lords now wanted money to fit out their forces for Palestine—it was the towns which had the money, and they demanded charters in exchange.[1] The stronger and wealthier the town, the more privileges it got—and the Crusades gave a great impetus to all trade. The Charter which Richard I granted to Lincoln[2] in 1194 gives a general idea of what these privileges were: it runs as follows:

'Richard, by the grace of God, King of England, etc., to all his faithful subjects, French and English, greeting. Know that we have granted to our citizens of Lincoln that none of them shall plead any case outside Lincoln, except pleas about tenures that lie outside the city, and cases in which "minters" and our ministers are concerned. We also grant them quittance from *murdrum* within the city and in the jurisdiction of the port reeve, that none of them shall be liable to ordeal by battle, and that in pleas of the crown they may prove their case in accordance with the customs of the citizens of London, and that within the city no one shall take entertainment by force or by marshal's right. We also grant that all citizens of Lincoln may be quit of *thelonio et passagio* [perhaps translatable by "dues and customs"], throughout all England and the sea ports, and that no one may be in danger of the forfeiture of his goods except in accordance with the law of our citizens of London: that in the city in no plea shall a fine be levied for *miskenninga* [shall we say "alteration of procedure"]; and that they may have their lands and tenures, their sureties and their debts, justly, whoever may owe it to them. In the case of lands and tenures within the city, justice shall be done in accordance with the custom of the city: in the case of all debts contracted, and

[1] Later on it was to the King's interest to exchange feudal dues for a money-rent collected by responsible burghers; cf. Edward I's motives in developing representation of towns in Parliament.

[2] Lincoln had had its Weavers' Gild since 1131.

sureties made, at Lincoln, the pleas shall be held at Lincoln. And if any one throughout England shall take due or custom from the men of Lincoln, on the commital of the offence the reeve of Lincoln shall make distraint at Lincoln. In addition we grant to the men of that town that they be quit of bridge-toll [1] and forced contributions by their own reeve or any other bailiff. We grant to them these aforesaid customs and all other liberties and free customs which our citizens of London have or shall have, to enjoy fully and freely according to the liberties of London and the laws of the city of Lincoln.

'Wherefore we direct that they and their heirs shall have and hold all these aforesaid privileges from us and our heirs on rendering annually £180 with all that belongs to our treasury, in two parts, at Easter and Michaelmas, by the hand of the Reeve of Lincoln. And the citizens of Lincoln may make whom they wish to be their reeve, annually, to do duty to us and to them. Witness, the Archbishop of Canterbury, the Marshal, etc.'

From this it will be seen that the privileges fall into five groups :

(1) Lawsuits in which Lincoln citizens are concerned are to be held in Lincoln—except a few special ones which deal with the rights of the Crown. That would save them from the dangerous and expensive journey to London or to another town.

(2) They are exempt from various feudal customs, such as deciding a dispute by fighting, or having to provide food and lodging without payment for the King's officials.

(3) They have not got to pay the burdensome local dues if they are travelling or sending goods from one town to another. These would be a great hindrance to the development of a town's trade.

(4) They are entitled to recover debts or to enforce contracts : in the case of a lawsuit about such matters with the inhabitants of another town, the case is to be tried at Lincoln ; and the Reeve (or Mayor) of Lincoln can seize goods belonging to any inhabitant of the offending town, which happen to be in Lincoln, to the extent of the amount owed.

(5) They can elect their own Reeve annually, who will make

[1] i.e. liability to repair the bridge.

whatever arrangements the citizens think fit for raising and paying to the King £180 yearly. This was the price of the Charter, i.e. about £5,500 in our money. In return for this the town is allowed to manage its own affairs in its own way, free from the interference of outside officials. In doubtful cases they have established their right to enjoy the same privileges as London, the most 'advanced' town in England.

The machinery by which the town regulated its own affairs was the Gild. This was not a new idea: it had existed from the earliest period in the Middle Ages, but mostly perhaps for religious or social objects—a kind of club. Men did not like doing things by themselves: they preferred to be members of some society and to feel the comfortable link with their fellow men. They worshipped as members of a great society, the Church; they played as members of a society, 'with butt-fillings and such things as be convenient;' they had been governed as members of a society, the feudal system. Now that towns were organizing themselves, as something rather apart from the old feudal system, men naturally formed a society to manage the town—the Gild Merchant. This was at first free to all men in the town—the 'freemen' of the town. They formed a Fraternity among themselves—they were Brothers, members of one great family. But trade was a privilege: outsiders could not be allowed to buy and sell in the town and enjoy the right the townsmen had purchased so dearly. So they formed a protective body as regards outsiders, and a man who did not live in the town was only allowed to join this society on special conditions and on the payment of a heavy fee. Through this society—the Gild

THE MERCHANT
From the Ellesmere MS. of Chaucer

Merchant—the men of the town provided for their own local government.[1]

The town was divided up into wards, each ward electing annually its two or three Aldermen: and from the council of Aldermen the Reeve or Mayor was appointed. This council was almost exactly like the corporation of a modern town. It held its own Law Court, with the Mayor presiding, as he does to-day, to settle disputes among the citizens. It made regulations for keeping the town clean—though it was satisfied with a pretty low standard: it thought it had done its duty when it had forbidden butchers to throw their offal into the middle of the road. In disputes with the King or with another town, it discussed in common what course should be taken. But it also did something that a modern corporation does not: it regulated the trade of the town—how and where men should work and sell; what prices they should charge: what should be done about 'aliens' who wanted to come and settle in the town. To do this business it met in the Gild Hall, and a beautiful building it was. Many still remain, for example at Coventry,[2] to remind us that these old craftsmen loved good workmanship and took pride in making their Gild Hall as fair and noble as they could, that it should be worthy of the city which was their boast.

THE REEVE
From the Ellesmere MS. of Chaucer

[1] Though in some cases, e. g. at Ipswich, the government of the town was distinct from the Gild Merchant: but the same men would generally belong both to the Borough and the Gild.

[2] A gild had to have a hall for its meetings; it was a question of convenience which of the halls came to be used for Town purposes, and so became, in modern terms, the Town Hall. At Ludlow, for instance, the hall of a social gild was used.

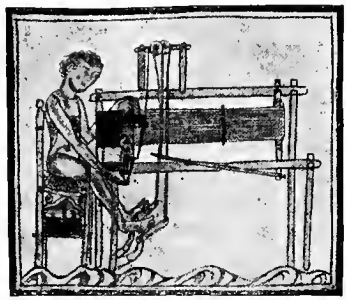
But trade developed and became more complex : each special trade or craft required its own special rules, and the regulation of all these details as well as the general government of the town became too great a business for the Gild Merchant. So in the late thirteenth century there was a general appearance of specialized Gilds—Craft Gilds—to deal with the growing specialization of trade. Each craft had its own Gild—bakers, weavers, saddlers, shoemakers, lawyers, &c. There was the Master with his Wardens, elected by the members of the Gild each year from among themselves : these looked after the special interests of the trade, while the Gild Merchant devoted itself more and more to the general government of the town. So each burgher was in general a member of two Gilds—the Gild Merchant, to look after the interests of the town as a whole, and his special Craft Gild, to see to the particular interests of his trade.

Apprenticeship was an essential feature of a Gild System, as it guaranteed good work. The Hull Weavers laid it down that ' no man set up a loom within his house but if he have been prentice seven years at that occupation '—under the heavy penalty of £10. Alien apprentices were not favoured. In 1419 the tapiters (coverlet weavers) of York forbade a master, on pain of a £2 fine, to take an apprentice who was not English-born. The boy who wished to enter a trade—usually that of his father—was bound as an apprentice for five or seven years to some master-craftsman who, in return for his work, undertook to teach him the trade.[1]

[1] The following agreement, of 1459, shows what the duties of master and apprentice were :

' This indenture made between John Gibbs of Penzance in the county of Cornwall of the one part, and John Goffe, Spaniard, of the other part, witnesses that the aforesaid John Goffe has put himself to the aforesaid John Gibbs to learn the craft of fishing, and to serve with him as apprentice from the feast of Philip and James (May 1) next to come after the date of these presents until the end of eight years then next ensuing and fully complete ; throughout which term the aforesaid John Goffe shall well and faithfully serve the aforesaid John Gibbs and Agnes his wife as his masters and lords, shall keep their secrets, shall everywhere willingly do their lawful and honourable commands, shall do his masters no injury nor see injury done to them by others, but prevent the same as far as he can, shall not

When the apprentice was out of his apprenticeship he worked for two or three years as a 'journeyman'—that is, he was paid wages by the day—*journée*. Usually during this time he travelled from town to town, and so gained experience of his trade in various parts of the country. When he wanted to become a 'master craftsman' himself and to settle down, he submitted to the Wardens of his Gild his 'Masterpiece'—that is, a piece of work to show that he was duly skilled in his craft and that his workmanship was up to the necessary standard. If that was approved, he was admitted to full membership of the Gild and became a 'Gild brother'. For those who wished to enter the learned professions there were the same grades to be gone through. The youth became an undergraduate at a University where he learnt his 'craft'—philosophy, law or medicine. As a Bachelor of Arts he gained experience for a few years, and then, on the presentation of his 'Masterpiece'—a thesis on some subject—he became a Master of Arts.



A LOOM (MS. at Trinity College, Cambridge)

The duties of the wardens and officers of the Craft Gild were in general to ensure that all worked 'for the honour of the good

waste his master's goods nor lend them to any man without his special command. And the aforesaid John Gibbs and Agnes his wife shall teach, train, and inform or cause the aforesaid John Goffe, their apprentice, to be informed in the craft of fishing in the best way they know, chastising him duly and finding for the same John, their apprentice, food, clothing, linen, and woollen, and shoes, sufficiently, as befits such an apprentice to be found, during the term aforesaid. And at the end of the term aforesaid the aforesaid John Goffe shall have of the aforesaid John Gibbs and Agnes his wife 20 shillings sterling without any fraud. In witness whereof the parties aforesaid have interchangeably set their seals to the parts of this indenture. These witnesses (etc.) given at Penzance . . . April in the 37th year of the reign of King Henry the Sixth after the conquest of England.'—Quoted in Bland, Brown, and Tawney, *English Economic History: Select Documents*.

folk of such misteries': they regulated apprenticeship—their years of service and the number that each master might have, so that he could train them properly. They fixed hours and conditions of work, forbidding work by night (which would produce bad workmanship) and work on holy days, which would give one man an unfair advantage over another. To enforce this, they had the right to enter and inspect any workshop. They fixed prices at which all members of the Gild were to buy and sell, so that every Gild brother had an equal chance. They tried to secure the good behaviour of all members, and they acted as a kind of Benefit Club in cases of illness or where members had fallen on evil times.

It was among the cloth-weavers of London that the first of these Craft Gilds arose, as early as 1100[1]; and they were the first to break away from the Gild system. The reason is the same in both cases. Wool and woollen goods are a necessity for all; there is therefore an important trade in them. Wool also has the advantage that it does not spoil by keeping: it is thus very suitable for an export trade. The woollen trade was, therefore, the first to be influenced by new developments and important enough to strike out new methods for itself to suit changing circumstances. It led the way in specialization in England: it led the way in starting foreign trade. The first led to the founding of the Craft Gild, the second to its downfall—for a Craft Gild cannot control a trade that has ceased to be local.

Originally the members of the Gild were manufacturers and retailers, masters and workers, all at once. But as trade developed, there arose a division among those who worked in the industry, and especially among those in the woollen industry. There were those who actually spun the yarn and wove the cloth—the workers; and those who arranged for the supply of raw wool and for the disposal of the woven cloth—the dealers or middle-

[1] In the twelfth century Weavers' Gilds, enjoying privileges similar to those granted by Henry I to the weavers of London, sprang up at Lincoln, Oxford, York, Winchester, and Nottingham, while there was a Fullers' Gild at Winchester.

men. It was the latter—the dealers—who came to control the Gilds. They became exclusive ; they tried to prevent journeymen from becoming masters and to keep them always in the position of wage-earning workers. The idea of the Gild as a Fraternity broke down : it was felt that the Gilds, by trying to create a monopoly were hindering instead of helping trade. The new economic conditions of the sixteenth century dealt them a heavy blow, and the Act of 1547 which confiscated to the King that part of a gild's property which was devoted to religious purposes was interpreted which such ' liberality ' that the gilds, as an effective trade organization, practically came to an end.

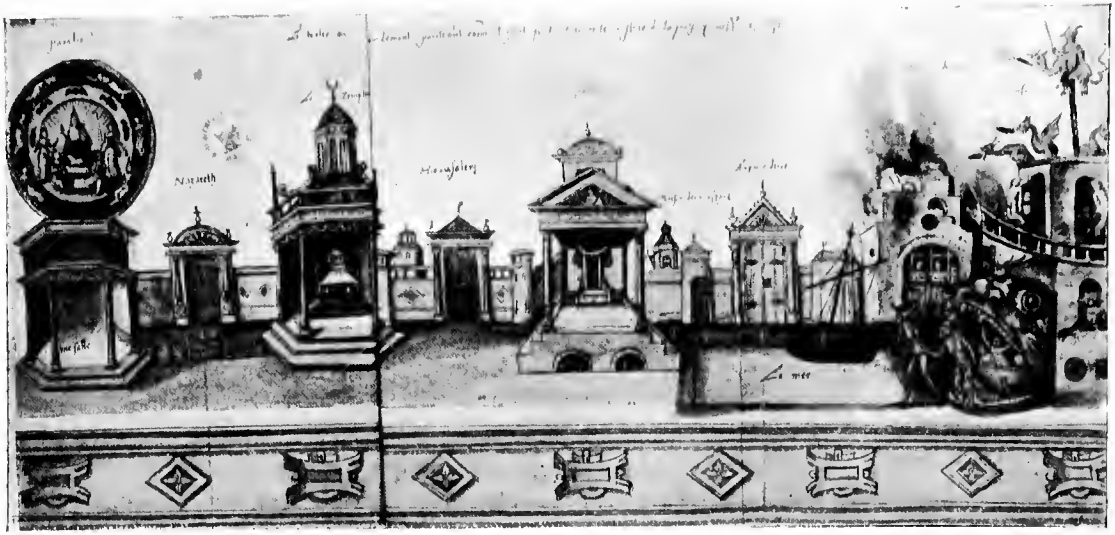
The first thing that strikes us as we look back on these mediaeval Gilds is that there was no competition. Members of the same Gild were ' Brothers ' and were supposed not to injure but to help one another. Any Gild brother was entitled to share in the purchase that another Gild brother had made, at the same price that had originally been paid. ' Engrossing ' or ' regrating '—i.e. trying to ' make a corner ', or buying to sell again at a higher price in the same market, was strictly forbidden. Selling prices were fixed not by supply and demand, but in accordance with what was ' fair ' : it was not considered honourable to take advantage of another man's necessity and to charge him an exorbitant price merely because he must have the article which you happened to possess. This fostered a spirit of working ' for the honour of the Gild ' and for the good of the community—not scamped work at the highest possible price, to make as much money as you could for yourself, but honest work at a fair price for the good of all.

The next thing that strikes us is the absence of a marked division between Capital and Labour : the apprentice when he had learnt his trade became a journeyman : the journeyman when he had gained his experience became a master : there were no ' hands '. There was division of labour : and often disputes between rival crafts whose work nearly overlapped—for instance there was a dispute in 1428 at York, between the smiths and the farriers, as to which of the two Gilds should deal with certain classes of

work. This meant that each man, instead of doing one little process, did the whole process with which his craft was concerned however small the process: he designed and carried out the design: he felt something of the joy of creation—he was an artist.

Besides this, the idea of working for the common good produced a civic spirit. On holy days there were pageants (of which the Lord Mayor's Show in London is a survival) and Miracle Plays. Scenes from the Bible, representing the Fall and Redemption of Man, were acted, each Gild making itself responsible for one scene. The Visit of the Three Kings to our Lord's Cradle at Bethlehem was taken by the goldsmiths—for the making of crowns and kingly jewelry was particularly their work; the Flood was taken by the shipwrights, for that brought in Noah's Ark. Each scene had its own car: they went in procession throughout the town, halting at convenient stages to perform their part. Some of these Miracle Plays have come down to us, among them the 'Pageant' of the Gild of Shearmen and Tailors at Coventry.

The town was sometimes enclosed within walls, and the gates were closed at sundown. After that no stranger might enter, unless some burgher of the town would be security for his good behaviour. The houses were high, the streets narrow and winding; for the smaller the space enclosed, the easier it was to defend, and there was little wheeled traffic to make broad streets necessary. The shop fronts were open (as they often are in a butcher's shop to-day) and the master or his apprentice was within each shop to see that the goods were not stolen. As few men could read, it was no use having names: instead great signs were painted, giving a picture of the kind of goods for sale. These hung out over the street, to the great danger of the heads of the passers-by. Merchants lived above their shops, and the upper stories projected over the street, so as to make the rooms larger: in some places men could almost lean out and shake hands across the street. Men of the same craft lived together in the same quarter of the town: the name of



THE STAGING OF A MIRACLE PLAY

the street has often survived, sometimes even the houses. A good example is Butchers Row in York, where the same trade is carried on in the same buildings as it was hundreds of years ago. In the centre was the market place with sometimes—as at Campden in Gloucestershire or at Dunster in Somerset, both important centres of the wool trade in olden times—a covered market where goods could be laid out for sale. Besides the

CANTERBURY PILGRIMS. Showing costume and a town of the fifteenth century

weekly market for the district, once or twice a year there would take place either within or just outside the big towns the great fair, to which merchants would come from far and near, sometimes, to the famous fairs such as Stourbridge near Cambridge, from across the sea. Such a fair would last for a full week [1]: booths roughly made of branches would be set up; the town officials would be there to proclaim at the opening the Assizes of Bread and Ale—that is, the price at which such goods had to

[1] Stourbridge Fair itself lasted longer. It was proclaimed on the 4th Sept., opened on the 8th, and the business was conducted for three weeks.

be sold during fair-time ; to settle disputes, there was the Court of Pie Powder (*pied poudré*, dusty foot) at the entrance of the market, where justice, rough and ready but prompt, was administered according to 'Law Merchant'. In the market square too there would be the Gild Hall, fair with carved stone and wood work ; and, towering above all, the Cathedral or Abbey Church, mounting aloft with flying buttresses and soaring arches, glowing with painted windows and gilded carving, which spoke to men of a yet more glorious city never built with hands, the City of God.

CHAPTER IV

THE EFFECT OF THE NEW WORLD ON ENGLAND'S TRADE

THE year 1485 is often spoken of as the beginning of modern history. No one year, it is evident, saw the change from mediaeval to modern conditions, but a worse landmark might be chosen than the year which rang in the Tudor Dynasty and rang out the Wars of the Roses. Caxton's printing press had seen twenty-five years' service when the sixteenth century opened. Gunpowder had already decided the fate of more than one battle. If the Reformation had not begun, its morning star Wycliffe had already translated the Scriptures into the mother tongue. Western Europe was taking the shape in which we now see it, and France and Spain were becoming consolidated kingdoms. In 1453[1]—the last year of the Hundred Years' War—the Turks had taken Constantinople and put an end to that Eastern half of the old Roman Empire, which Constantine had founded when the Romans still occupied Britain. Greek learning was driven

John granted a fair at St. Ives in the county of Huntingdon to the Abbey of Ramsey for eight days.

[1] The prudent alliance in this same year of the Armourers' Company, whose trade was decaying, with the Braziers' Company throws a sidelight on to the changing conditions. The Armourers' and Braziers' Company still flourishes as one of the Livery Companies of the City of London.

westwards and scholars fled, with the few treasures of the old Greek literature that had been stored there, to Italy and thence in the course of a few years to the rest of Europe.

Besides scattering more widely the classics of Ancient Greece the fall of Constantinople also meant the closing of the overland trade routes by which, all through the Middle Ages, Europe had traded with the East—the last of which went with the Turkish conquest of Egypt in 1517—and it became imperative to search out new trade routes by which the spices necessary to make salt meat palatable could be brought to Europe.

Spain and Portugal, the powers most affected, were the first to seek a remedy. Portugal, where Prince Henry the Navigator had already set up a school of training for those longer voyages which the invention of the mariner's compass made possible, turned east, and through Vasco da Gama's discovery of the Cape route, got the bulk of the East Indian trade. Spain, under whose flag Columbus had discovered America in 1492, turned west. Magellan in 1520 passed through the Straits that bear his name. Cortez conquered Mexico in 1522, and ten years later Pizzaro conquered Peru. Thus Spain obtained the bullion, the precious metals which were coming to be looked upon as the basis of power.

Ever since the Great Plague swept over Europe in 1348 money had begun to play a more important part in the world. The relationship between landlord and tenant, employer and workman, was becoming a money relationship. The Black Death had broken up the system under which land had been held, and in doing so broke up also the rigid feudal barriers which had divided class from class. The Wars of the Roses gave the old social order a further blow, by destroying many of the noble families, and a new merchant class was beginning to arise. Money was coming to be employed in commerce. As we should phrase it to-day, there was an increasing use of capital. It is because the changes in industry in the sixteenth century were brought about by this growing money-relationship between man and man, and by the increasing use of capital, that they are called an *Economic*

Revolution.[1] In the Middle Ages money had been used on a large scale for building churches, castles, and guildhalls, and for equipping armies. The Jews and the Lombards had been the 'capitalists',[2] but they were rather bankers or money-lenders. The new kind of capitalist was a man who used his capital in industry, buying raw material and tools, and paying other men wages to work up the raw material; or spending money in buying goods and ships to transport them in, and then taking them abroad and selling for a higher price. It was dawning on men's minds that capital was a form of wealth that could be used to produce more wealth. This kind of capitalist was new, and the Fuggers and the Welsers—first of Augsburg, then of Antwerp—were types of him. They had all their stock in trade movable enough to be able to migrate from Augsburg to Antwerp when the closing of the land trade routes left Augsburg high and dry as a trading centre.

The new hoards of silver that were coming in from America found their way—just as capital does to-day—into the hands of those men who were best able to use them. The men of the Low Countries got a large share, and Antwerp, which was a sort of permanent fair open all the year round, became the chief mart in Europe. The riots of the Spanish soldiery for their pay ended its prosperity: the 'Spanish Fury' of 1576 injured it so badly that it never recovered its leading position, and much of its trade was transferred to London.

[1] There were other factors. The introduction of new industries, connected for example with printing, ship-building, and the improvement of the lathe; the passing of the gilds; the new system of poor relief following upon the dissolution of the monasteries; together with the introduction of capital into industry, made the changes in the sixteenth century second in importance only to the Industrial Revolution of the eighteenth and nineteenth centuries.

[2] e.g. when the great financier, Aaron of Lincoln, died in 1189, the Cistercians owed him £4,800 in respect of Rievaulx, Kirkstall, Roche, Rufford, Beverley, and four other abbeys. Richard I, as Aaron's legatee, allowed these abbeys to clear themselves for £666 13*s.* 4*d.* The rate of interest charged on mediaeval loans was seldom less than 40 per cent., and often higher.

England at the close of the fifteenth century was already on her feet as a commercial nation, and so was able to make good use of the new conditions and opportunities. Hitherto she had been a wool-growing country, but under the Yorkists and Tudors weaving was making headway. There was a trade boom in the manufacture of woollen goods and cloth. Growing wool was no less profitable than it had been in Edward III's time, but the wool was now needed for manufacture at home instead of for export to Flanders. The feature of sixteenth-century England was that it was both a wool-growing and a wool-manufacturing country, and these two occupations were the staple industries. Sheep-farming went on flourishing, and up to the middle of the sixteenth century more and more land was enclosed for pasture.

Indeed the first thing that would strike the eye in passing from fourteenth- to sixteenth-century England would be the large tracts of land in certain counties that were enclosed for sheep-rearing. The two principal centres of this enclosing were the east and the Midlands—Suffolk, Norfolk, Essex, Kent, Leicestershire, Hertfordshire, Northamptonshire; and Oxfordshire, Berkshire, Warwickshire, Buckinghamshire, and Worcestershire. It is worth while to note that the enclosures did not affect the whole country, because many writers speak of them as if they did. The feeling against them was very strong. 'These enclosures do undo us all,' said a husbandman in a Dialogue [1] of 1548. 'I have known of late a dozen ploughs within less compass than six miles about me laid down within these seven years, and where 40 persons had their livings, now one man and his shepherd hath all. Which thing is not the least cause of these uproars, for by these enclosures men do lack livings and be idle.' Sir Thomas More tells the same tale in his *Utopia*: 'Your sheep that were wont to be so meek and tame and so small eaters, now, as I heare say, be become so great devourers and so wild that they eat up and swallow down the very men themselves. They consume, destroy, and devour whole fields, houses, and cities . . . one covetous and insatiable cormorant may compass about and

[1] *Commonweal of this Realm of England*, p. 15.

enclose many thousand acres of ground together within one pale or hedge, the husbandmen be thrust out of their own ; . . . either by hook or by crook they must needs depart away, poor, silly, wretched fools, men, women, husbands, wives, fatherless children, widows, woeful mothers with their young babes, and their whole household, small in substance and much in number, as husbandry requireth many hands.' Bishop Hugh Latimer in a sermon before Edward VI told how his father was 'a yeoman with no land of his own, but had a farm of three or four pounds by year at the uttermost and thereupon tilled so much as kept half a dozen men, while his mother milked thirty kine and there was walk for a hundred sheep . . . but now you landlords, you rent-raisers, I may say you step-lords, you have for your possessions yearly too much'

Since the Black Death had made labour scarce and tempted landlords to take the line of least resistance (which was also the line of most profitable returns) and rear sheep, they no longer had the same inducement to live on their estates. So long as payment was by service or in produce, it was as well to see the labour was done and to consume the produce. Under the new conditions there was less labour to oversee and little produce to eat. A steward or bailiff could look after the shepherds and collect the rents, though the landlord did not always trust them to sell the wool. Consequently landlords ceased to live on their lands. The personal bond between class and class was broken. The old manorial system was hard, but it was human. The lord lived on his estate and knew his tenants. They worked on his demesne and took up their quota of produce to his manor. They helped him in his hunting, and were proud of his magnificence and his guests. Their wives and daughters cooked and sewed and spun for the ladies of his household. On Sundays and Festivals all would assemble together in the village church. On holidays the lord would attend the sports on the village green, his sons would join in them, and the tenants would be feasted at the manor. At Christmas time there would be general wassailing and merrymaking, and mutual tokens of goodwill. Men will

endure much hardship and low wages cheerfully so long as there is a personal bond to make them human. The feeling against enclosures was something like the feeling against machinery two hundred years later. It was not only felt that by reducing the need for labour enclosures were taking the bread out of the mouths of the poor, but there was a dumb resentment at the inhumanity of the system—a feeling that the human bond of personal relationship was being snapped.

SPINNING. Second half of fifteenth century

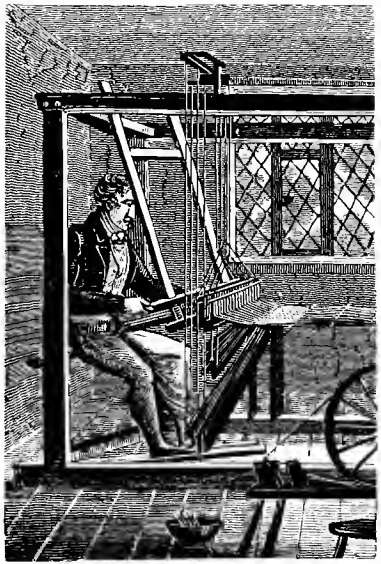
Beside the enclosing, all the writers of the time speak of the great rise of prices. Latimer's father, on the farm mentioned a page or two back, ' did find the King a harness, with himself and his horse, . . . I can remember that I buckled his harness, when he went unto Blackheath field. He kept me to school, or else I had not been able to have preached before the King's majesty now. He married my sisters with five pound or twenty nobles apiece, so that he brought them up in godliness and fear of God. He kept hospitality for his poor neighbours and some alms he gave to the poor—and all this he did of the said farm, where he that now hath it payeth 16 pound by year or more, and is not

able to do anything for his prince, for himself, nor for his children, or give a cup of drink to the poor.' The Cappers of Coventry had to give their journeymen *2d.* a day more than they were wont to do, 'and still they grumbled,' and 'by reason of the dearth we that are artificers can keep few or no apprentices like as we were wont to do. Therefore the citie (Coventry), which was heretofore well inhabited and wealthy, is fallen for lack of occupiers to great desolation and poverty.' The merchant in the same dialogue[1] complains of the wretched state of the roads and bridges, and of the high price of things not only at home but from beyond sea, although 'I never saw more plentie of corne, grasse, and cattell of all sorte, than we have at this present'. In short, though contemporaries did not fully see it then, the rise of prices was general, abroad as well as at home, and there were other causes to account for it besides enclosing—the chief of which was the great influx of silver from the New World.

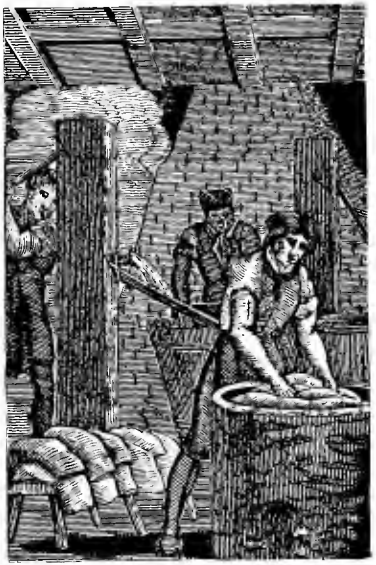
The rise of prices emphasized the poverty which was very marked in the first half of the century. The villein had once been bound to the land; but this had meant also that the land was bound to the villein and his family. Without such a vast catastrophe as the Black Death, and the villein's own wish to change the conditions of his tenure, it would not have been easy even for a greedy landlord to eject him. The Dissolution of the monasteries dislodged countless other peasants. When an Abbey was sold the whole administrative machinery, controlling scores of manors, was dislocated: the stock was sold and the tenants turned off. Some, of course, may have remained with merely a change of masters. But, though More accuses the abbots of enclosing, we know that the bulk of the enclosing of abbey lands was done after the Dissolution by the rapacious new owners, who were *nouveaux riches*. At a moderate estimate one-fifth of the land of England was held by the monasteries, so that the vast extent of the change and the upset to economic conditions are not easy to imagine. Apart from the selling up of the stock, the raising of the rents and the upset to the tenants, the charitable

[1] *Commonweal of this Realm of England.*

THE SPINNER



THE WEAVER



THE DYER

works of the abbeys had been very considerable. And the story of the decay of Coventry—the home of weavers, dyers, and cappers and the place where a famous blue thread was made—illustrates the way in which trade might be injured. Till the Reformation Coventry was a prosperous woollen town. 'But,' said Dugdale the Warwickshire antiquarian, writing a century later, 'to so low an ebbe did their trading soon after grow, for want of such concourse of people that numerously resorted thither before that fatal dissolution, that many thousands of the inhabitants, to seek better livelyhoods, were constrained to forsake the city: insomuch as in 3 Ed. 6 (the third year of King Edward VI) it was represented unto the Duke of Somerset, then Protector, by John Hales, a person of great note in those daies, and whose memory is still famous here, that there were not at that time above 3,000 inhabitants, whereas within memory there had been 15,000.'[1]

Another factor in the poverty and unemployment was the confiscation of the funds of the religious gilds by Protector Somerset. The gilds had regulated local trade on a basis of fraternity. They had cared not only whether the yarn spun, the cloth made, and the dye used in a town were of good quality, but whether it was well with Joan the Spinner, Bill the Weaver, and Dip the Dyer. They were the mediaeval counterparts of modern insurance societies. The confiscation of their lands and wealth must have meant something like what the confiscation of the funds of the Prudential Insurance Society would mean to-day. The repeated 'uproars'—like the Pilgrimage of Grace, Ket's Insurrection, and many without a name—and the repeated Poor Laws prove the existence of a good deal of poverty.

Hark! hark! the dogs do bark,
The beggars are come to town,

is a Tudor ballad. The lowest point was reached in Edward VI's

[1] Dugdale, *Warwickshire*, i. 146. In Edward IV's reign Coventry, along with Bristol, York, and Norwich, was one of the four towns outside London which was considered important enough to mint his beautiful 'Rose Nobles'.

reign. We have two descriptions of England, one by Sir Thomas More, in the reign of Henry VIII, and one by William Harrison,[1] in the reign of Elizabeth. More's *Utopia* is despondent, Harrison's *Description* almost jubilant; nothing could be more eloquent of the improvement in the country's prosperity than the difference in tone between the two.

The most hopeful thing in the sixteenth-century labour market was the growth of the woollen manufacture. The aliens, so assiduously encouraged by Edward III, had done much in the way of introducing better methods of working. Norwich had a very large population and was the chief centre of the industry for this cause. 'What money one worsted-maker brings into the town where he dwells and how many have their livings under him, Norwiche may sufficiently declare, which by a few worsted makers it hath grown to great wealth and riches.' It suffered greatly by a second visitation of the Black Death in 1477 and by Ket's rebellion in 1549 when 'a number of rascals and naughty lewd persons stole out of the city of Norwich and went to camp.' Throughout the sixteenth century the immigration of aliens was going on. The first fugitives from Alva's persecutions settled in Sandwich, but in 1565 the Mayor and Corporation of Norwich applied for some of them, and by their aid abundantly restored the city's prosperity as the chief seat of the manufacture of the 'new drapery'. The French Government's persecution of its Protestant subject, the Huguenots, gave England more weavers. Some of them settled in Canterbury, where a house they occupied is still to be seen in the present Unitarian Chapel in the Friars, and their place both of work and worship in the Crypt of the Cathedral continues to celebrate the Huguenot service in French every Sunday to this day. Others settled at Painswick and in the Stroud Valley, which is fitted by nature for weaving and dyeing. Two families, the Playnes and the Clutterbucks, still flourishing in the Stroud Valley, are of Huguenot origin, and date from this time. An Act of 1585 testifies to the importance of the Gloucestershire 'Whites and Reddes'. Harrison sums up

[1] Harrison's *Description* was bound up with Holinshed's *Chronicle*.

the benefits reaped from the alien workman thus : ' In time past the use of this commodity (wool) consisted for the most part in cloth and worsteds ; but now, by means of strangers succoured here from domestic persecution, the same hath been employed unto sundry other uses, as mockados, bays, vellures, grograms, &c., whereby the makers have reaped no small commodity.'

The weavers were the first to cast themselves free from the gild system when they found it was no longer of service to them. The rapid changes in labour conditions had upset the gilds. The advent of numbers of men and women, ejected by the enclosing, into the towns seemed to threaten all their cherished privileges. It upset the hereditary idea in the crafts of the son following his father's industry. Consequently there was a tendency for weavers to set up outside the towns, where they would be free from restrictions. In this way such villages as Evesham, Worcester, Birmingham, Bury, Bolton, Leeds, Bradford, and Manchester sprang up. Halifax never had a gild, and sold its kerseys at the Fairs. The destruction of the gilds left the way open for some new form of organization, and the rise of the price of wool, which, Sir Thomas More says, was such ' that poor folks which were wont to work it were now able to buy none at all ', gave new opportunities to the man with a little money. The complaints made in the west in 1548, at the time of the risings against enclosures, that farmers were becoming clothiers, show that the new industry was carried on side by side with agriculture, and by the same men and women. And this overflow of industry into agriculture served further to break up the old manorial system.

It was in this way that the plan of giving out wool to be spun and woven in the homes—known as the Domestic System—grew up. A person known as a clothier (not a cloth worker in the old sense of the term, but an employer without a factory) was the pivot of the system. He bought the wool, gave it out to be spun, then collected the yarn, which again he gave out to be woven into cloth, fulled, and dyed. The cloth was his ; he did the marketing and he reaped the profit : he was, in fact, a capitalist.

All the people who worked at it were wage earners, and there was a standard wage for each process that would be recognized as common to a district. The system had begun as early as the days of Piers Plowman, and the methods were not always honest even then :

My wife was a weaver, and made woollen cloth ;
She gave wool to spinsters, who then spun it out ;
But the pound that she paid by weighed a quarter-pound more
Than my own pair of scales showed, whose weights weighed the truth.[1]

Dishonesty did not, of course, all operate one way. Spinners and weavers were sometimes tempted to eke out the material given them by spinning and weaving 'thin', and not using all the material they were supplied with. But the system worked smoothly and by the seventeenth century employment in the country was steady.

The advantages of gathering spinners and weavers together under one roof, of bringing them to the raw material instead of handing out the raw material to them, did not escape notice at this time and definite efforts were made to establish what we should call factories. In 1339 Thomas Blanket of Bristol got into trouble for setting up 'instruments for the making of cloth in his house and causing weavers and other craftsmen to be hired'. He retrieved his character however—for soon after he became a Bailiff of Bristol. Jack of Newbury or John Winchcombe, who made kerseys that were famous on the continent, is said to have had a hundred looms in his house and to have fitted out 100 journeymen—whose services were not required, as the battle was over before they got there—to fight at Flodden Field. He prospered, for his will, dated January 1519, leaving moneys for the rebuilding of Newbury Parish Church, where his epitaph may still be read, is still here to prove it.

His fame was considerable. He was the hero of many ballads, and Thomas Deloney of Norwich, silk-weaver, ballad-monger, and writer of 'novels', who died in 1600, made him the subject

[1] Langland's *Vision of Piers Plowman*, v.

of one of his 'novels'.[1] This story is probably little more than a setting down on paper of the tradition about him which was but fifty or sixty years old. The book is dedicated to 'all famous cloth-workers in England', who are to be 'both loved and maintained' as being especially 'beneficial to the commonwealth'. Deloney gives a most lively and picturesque account of a visit paid by Henry VIII, Queen Katherine, Cardinal Wolsey and members of Henry's Court to Jack of Newbury's home and workshops. The King and Queen dined with the clothier and his household, 'all the floor being covered with broad cloths instead of green rushes'. The banquet was served all in glass, the use of which for drinking vessels was then only just coming in. The weavers sang the King a song, which he rewarded with a gift of 'an hundred angells to make cheer withal', and leave to fetch four bucks out of Donnington Park once every year 'without any man's let or controulement'; 'and ever since it hath been a custom among the weavers, every year presently after Bartholomew-tide, in a remembrance of the King's favour to meet together and make a merry feast'.

The King and Queen next saw the spinsters and carders, who likewise sang to them 'in dulcet manner', and after visiting the fulling-mills and dye-house, they were met by a group of children, each of whom presented the King with a gillyflower. Jack of Newbury informed their Majesties that these children earned their living by picking wool. 'With that the King began to tell his gillyflowers, whereby he found that there was 96 children.' 'Certainly,' said the Queen, 'I perceive God gives as fair children to the poor as to the rich, and fairer many times; and though their diet and keeping be but simple, the blessing of God doth cherish them. . . . Therefore,' said the Queen, 'I will request to have two of them to wait in my chamber.' 'Fair Katharine,' said the King, 'thou and I have jumped in one opinion.' So the King took four more to be pages in the royal household; eight he sent to the universities. 'Divers of the

[1] We must make allowances for a certain imaginative picturesqueness in Deloney's account.

THE HALIFAX GIBBET

The Halifax Gibbet-law is described by Deloney in his tale *Thomas of Reading*, and by Defoe in his *Tour through the Island of Great Britain*. The gibbet was a sort of guillotine, and the point was that every one present was expected to lay his hands on the rope that released a knife, so that the felon could be said to be executed by the general consent of all the citizens. The crime which the law was designed to prevent was stealing cloth from the tenters, and 'power was not given to the Magistrates to give sentence, unless in one of these three plain cases:

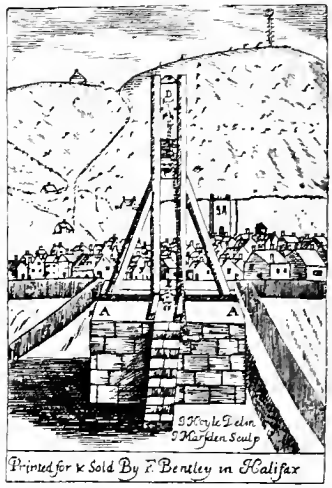
(1) '*Hand napping*, that is, when the criminal was taken in the very fact, or as the Scots call it in the case of murder, Red Hand.

(2) '*Back Bearing*, that is, when the cloth was found upon him.

(3) '*Tongue Confessing*, which needs no further explanation.

'The fact likewise was to be committed within the Liberties or Precincts of the Forest of Hardwick; and the value of the goods stolen was to be above thirteen pence halfpenny. . . . The country people were, it seems, so terrified at the severity of this proceeding that hence came the proverbial litany, which was used all over Yorkshire:

From Hell, Hull, and Halifax
Good Lord, deliver us.



AA, the Scaffold. B, the Piece of Wood wherein the Axe is fixed. C, the Axe. D, the Pulley by which the Axe is drawn up. E, the Malefactor who lyes to be beheaded. F, the Pin to which the rope is ty'd that draws up the Axe. (From Camden's *Britannia*, 1695.)

Hull was included in this petition, on account of their rigid discipline to beggars; for they whipt out the foreign poor and set their own to work.

'The manner of execution was very remarkable, by an axe drawn up by a pulley, and fastened with a pin to the side of a wooden engine, which when pulled out, the axe fell swiftly down and did its office. . . . The engine was removed . . . in the year 1620.'

noblemen did in like sort entertain some of those children into their services, so that in the end not one was left to pick wool.' Deloney's imagination does not stop even here. 'God so blessed them', he adds, 'that each of them came to be men

of great account and authority in the land.' Apparently Deloney did not approve of child-labour.

PART OF MODERN HALIFAX. The Church in the foreground

The mill itself is described in the following ballad, quoted in Deloney's book, but probably older than the book itself.

Within one room being large and long
There stood two hundred Looms full strong :
Two hundred men, the truth is so,
Wrought in these Looms all in a row.
By every one a pretty boy
Sate making quils with mickle joy.
And in another place hard by,
An hundred women merily
Were carding hard with joyful cheere
Who singing sate with voices clear.

And in a chamber close beside,
Two hundred maidens did abide,
In petticoats of Stammel red,
And milk-white kerchers on their head :

. . . . . .

These pretty maids did never lin [1]
But in that place all day did spin,
And spinning so with voices meet
Like nightingales they sung full sweet.
Then to another room came they,
Where children were in poor array :
And everyone sat picking wool,
The finest from the coarse to cull :
The number was seven score and ten,
The children of poor silly [2] men :
And these their labours to requite
Had everyone a penny at night,
Beside their meate and drink all day,
Which was to them a wondrous stay.
Within another place likewise
Full fifty proper men he spies,
And these were Shear-men every one
Whose skill and cunning there was shown :
And hard by them there did remaine
Full four score Rowers taking paine.
A Dye-house likewise had he then,
Wherein he kept full forty men :
And likewise in his Fulling Mill
Full twenty persons kept he still.

Even if imagination played the major part in this description it is a remarkable prophecy of what a factory might be. More than 1,000 persons are employed in it—390 men, 300 women, and 350 children. The processes of the industry are all done under one roof from the wool-picking by the children to the dyeing. There is humanity in it moreover : the boys work with mickle joy, the spinners and carders sing at their work, and the poorer children are fed at some canteen.

The names of other great clothiers have come down to us.

[1] To lin means to cease, to give over.
[2] silly = innocent, harmless, simple.

Cuthbert of Kendal, Hodgkins of Halifax, and Brian of Manchester are credited with having 'kept a great number of servants at work'—spinners, carders, weavers, shearers, and dyers. A rich clothier named Stump bought Malmesbury Abbey from Henry VIII and filled it with looms, intending to make 'a street or two' for the workers on the ground at the back. Later he tried to get a factory going at Oseney Abbey near Oxford, and to find work for 2,000 workpeople 'if they may be gotten, for the succour of the city of Oxford and the country about it'. But nothing came of it.

The feeling of the time was against this system;[1] the weavers complained with effect that 'the setting up of divers looms in the clothiers houses, and keeping and maintaining them by journeymen and persons unskilful to the decay of a great number of Artificers which were brought up in the Science of Weaving, their Families and Households', oppressed them; and the Weavers Act of 1555, which was designed to protect the Weavers as well as to arrest the decay of towns, forbade clothiers dwelling outside a corporate or market town to keep in their house more than one woollen loom at one time, or to profit by letting looms (another form of extortion and one of the worst known in the nineteenth century). Weavers were forbidden to keep more than two looms or to act as tuckers (i. e. fullers) or dyers. Tuckers likewise were forbidden to keep a loom.[2] Thus the Domestic

[1] In the same way the use of machinery was prohibited in order to defend acquired or traditional skill, which in the view of the Government it was worth while to maintain, and in order to avoid the risk of unemployment; e.g. gig machines in 1552, stocking machines in 1589, needle machines in 1623, were prohibited.

[2] This was all part of a conscious policy—designed to preserve existing social grades as necessary steps of the pyramid of the State: to maintain degree,

Which is the ladder of all high designs:

to prevent, on the one hand, one grade from oppressing another, and, on the other, by fixing prices as well as wages at a figure that was 'fair', to make each grade of life endurable. Bacon similarly commends Henry VII for 'making farms and houses of husbandry of a standard—that is, maintained with such a proportion of land unto them as may breed a subject to live in convenient plenty and no servile condition; and to keep the plough in the hands of the owners, and not mere hirelings'.

System remained the basis of manufacture, and held its own until the discovery of fresh supplies of coal and the invention of machinery opened the way for a new set of conditions.

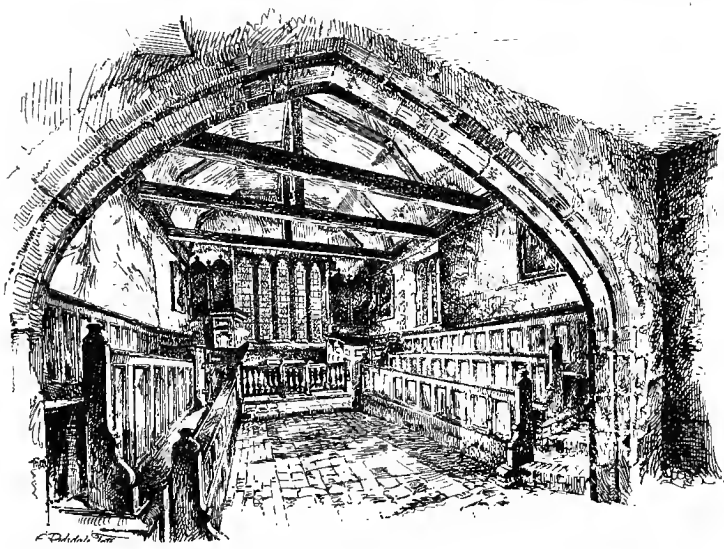
The extent to which the cloth industry developed at home is to be seen in the changes in the export trade. In Edward III's reign the bulk of the revenue was derived from customs on the export of raw wool, which yielded £68,000. By the middle of

MERCHANT ADVENTURERS' HALL, YORK. THE COURT ROOM

the fifteenth century the yield had fallen to £12,000. In 1307 the Hanse merchants, who were then the chief exporters, paid duty on half a dozen English cloths. In the middle of the sixteenth century an Italian observer estimated that our export of cloths to the Netherlands was not less than 200,000 pieces of all kinds.

The Government fostered trade by seeking new markets. Henry VII concluded two great commercial treaties for free trade with the Netherlands, where the Merchant Adventurers, who

had been temporarily excluded because of the Netherlanders' foolish patronage of Perkin Warbeck, were welcomed back with joy and festivities, and he made commercial treaties with Denmark, Spain, and Florence. He realized that the carrying trade of England ought to be in English hands, but failed to back up the Merchant Adventurers, who exported cloth, against the older Merchants of the Staple who had the sole privilege of



MERCHANT ADVENTURERS' HALL, YORK. THE CHAPEL

exporting raw wool to Calais and one port in the Netherlands. The Merchant Adventurers were, however, winning their way, and the shipments of the Staplers fell off by 50 per cent. in Henry VIII's reign. The Adventurers had two chief centres, London and York (which was now and for long afterwards the centre of the Yorkshire woollen trade). The London Adventurers and the York Adventurers were bitter rivals, but they united in their determination to drive the German merchants of the Hanse out of their privileged position in England and their

monopoly of the Baltic trade in cloth. In London there were constant 'demonstrations' against these gentlemen and their settlement the *Steelyard*, to the great delight of the London apprentices. One of these—Evil May Day, 1517—was quite a serious riot, lasting many days, and masters were ordered to keep all apprentices within doors. There is no reason to think that the discipline of the London masters was particularly bad, but to put this order into effect proved beyond their powers. The Hansard's charter was actually withdrawn by Edward VI. Mary restored it; but in 1578 it was finally abolished by Elizabeth.

The fine fifteenth-century hall of the Merchant Adventurers at York can be seen in Fossegate to-day. Here the merchants framed their laws and regulations, appointed and sat in judgement upon their apprentices, grumbled at the interference of their London colleagues, and plotted against their enemies the Hansards. The chapel underneath, in which they prayed for each ship that set sail the prayer that is their motto, 'Dieu nous donne bonne aventure', was then used daily and glowed with light from its stained glass windows, its offertory candles, and the satin and gold embroidery of its altar cloths. The Merchant Adventurers were the pioneers of the *English* foreign trade, and the parents of all the private adventurers of Mary's and Elizabeth's days and of the trading companies which won our commercial supremacy. The name of one of the early adventurers ought not to be forgotten; William Caxton was for thirty years Master of the English Gild of Merchant Adventurers in Flanders before he set up his printing press in Westminster.

The first great figure in the romance of English seamanship was John Cabot, who in a little ship, the *Matthew*, with a crew of eighteen men discovered the mainland of America in 1497. He thought, and all London thought, that he had penetrated to Cathay, as Marco Polo had called China. His next voyage was a bitter disappointment; he found no spices and silks, but a land apparently worthless for trade purposes. He returned home with his cargoes unsold, and for nearly a century North America was regarded as valueless in itself, and as an obstacle

that must be got round in order to reach the goal of the East. Meanwhile, English merchants were pushing their trade in Europe, and capturing the Mediterranean trade. Until the beginning of the Reformation commerce with Spain prospered—Katharine of Aragon was Queen of England—and 'divers tall ships of London', Bristol, and Southampton penetrated to the Levant. This voyage, out and back, took twelve months, and offered all the perils of the sea, including pirates. Richard Chancellor and Anthony Jenkinson, who later opened up trade with Russia in English kersies under the Muscovy Company, were trained in the Levant school. In 1521 Wolsey tried to get the Livery Companies of London to send an expedition of discovery to the north-west, but they would not foot the bill. An attempt was, however, made six years later with two ships, one commanded by John Rut, a sea captain, the other by Albert de Prato, a canon of St. Paul's. De Prato's ship foundered, but Rut persevered till he was turned back by ice, refitted in the fisheries at Newfoundland, and was the first Englishman to trade with the Spanish West Indies, whence he returned safely. The steady demand for cargoes for these expeditions was a great stimulus to English manufactures.

The Reformation, which closed the Spanish ports to Englishmen and procured for them sour looks and other difficulties in the Netherlands, now an unwilling part of the King of Spain's dominions, was a further incentive to find new markets. The African trade begun by William Hawkins and continued by Thomas Wyndham did not offer a great market for cloth. It was also extremely hazardous even for those days. The mid-Atlantic route to America and the West Indies was in Spanish hands. Hence there was a revival of effort in the middle of the century to discover routes either north-east or north-west—outside the limits of Portuguese and Spanish influence—to more profitable markets. The Muscovy Company, in the persons of Chancellor and Jenkinson, succeeded in opening up trade with Russia. The efforts to the north-west were fore-doomed to failure, but the objects of such adventure are quite clearly

stated by Sir Humphrey Gilbert—founder of the Colony of Newfoundland—in his *Discourse to prove a passage by the North-West to Cathaia and the East Indies*. In the forefront of them it is urged that 'the countries to be discovered would provide a market for the large production of English cloth, making us thus less dependent on the demand from European countries'. While Drake and the bolder spirits bearded the Spaniards in their special preserves, many English merchants seem to have accepted the second-best option—of sailing the less inviting seas not yet claimed by other princes—largely because, since these regions were colder, they thought there would be more demand for woollen goods, 'of that temperature which in all likelihood will afford a most liberal vent of English cloth and kersies'.

The use of capital—coupled with actual experience—caused great strides to be made in building larger and better ships. Henry VIII founded the Royal Navy as a Department of State, and a beginning was made in systematic training of pilots and setting up of sea-marks. The 'chronicler' Harrison declared there to be 'no prince in Europe that hath a more beautiful or gallant sort of ships than the queen's majesty (Elizabeth) of England at this present'. None of these ships were worth less than 'one thousand pounds, or three thousand ducats at the least'. 'A well builded vessel', he adds, 'will run or sail commonly 300 leagues or 900 miles in a week. . . . There be of them that will be here, at the West Indies, and home again in 12 or 13 weeks from Colchester. . . . This also I understand by report of some travellers that if any of our vessels happen to make a voyage to Hispaniola, after they have once touched at the Canaries, they will be there in 30 or 40 days, and home again in Cornwall in other eight weeks, which is a goodly matter, beside the safety and quietness in the passage'.

The weaving industry and the growth of shipping were encouraged by the Government for very definite reasons. Regulation of commerce by the State had become a normal thing since the days of the Edwards. But Edward III's regulation had not gone beyond trying to foster trade and so secure good revenues.

He wanted plenty, and so he had an eye to the interests of the consumer, just as we have to-day. But in the sixteenth century it was not only the revenue of the state, but the power of the state, that interested the Government. There was no sudden change, and this new policy had its beginnings—as we are able to see now, looking back from a distance—in the reign of Edward III's grandson Richard II. In 1381 Richard forbade gold and silver to be exported, and said that the trade of English merchants was to be done in English ships. This was in fact the first Navigation Act. In 1392 he forbade alien merchants to engage in any retail trade or to export any spices (which they might pick up cheap from some other alien), which had once been brought to England. But these laws were isolated things rather than parts of a conscious policy. The law about aliens was passed to please the London merchants to whom Richard was finding it inconvenient to pay back the money he had borrowed.[1]

The nations of western Europe were now becoming strong, consolidated kingdoms, and were eyeing one another jealously. It behoved the sovereign to think more of the national strength and security; he could not afford to leave anything to chance. It is the glory of Henry VII, who was not easily caught napping and understood the art of minding his own business, that he saw this clearly. Elizabeth's great minister, Cecil, nursed the realm as if he were the steward of a private estate. The new situation was met in two ways. A very different and complicated system of foreign policy arose, with ambassadors at the courts of other powers and the sort of machinery that we see to-day. The second way in which the new situation was met was by trying to make the nation strong at home. Italian views, which influenced

[1] In 1445 objection was taken to the 'Merchaunds Straungers Italyans' having liberty to 'ryde aboute and to bye' woollen cloths, wool, wool-fells, and tin as they pleased—in other words to interfere with the staple trade of the country. The ballads of the time stated that they brought in exchange only spicery and grocers' ware, apes and japes,

> 'And things with which they featly blear our eye,
> With things not enduring that we buy.'

Englishmen a good deal, as any reader of Chaucer or Shakespeare can see for himself, were working in the same direction; the Florentine, Machiavelli, had taught at the beginning of the century that the object of all commercial activity was the power of the prince, and his views had gained wide acceptance. The Government acted, as it were, as if the country were in a permanent state of siege. It sought to provide, for example, that enough food should always be grown at home to make importing it unnecessary; this was a double gain, for, incidentally, agriculture ensured a stock of sturdy recruits for the army. The Government also provided that as far as possible goods should be brought to the country and exported from the country in English ships. This would mean a good navy. The eating of fish on more days than Fridays was encouraged because it would ensure a supply of good sailors. Home manufactures were fostered because goods made at home and sold abroad brought money into the country, and gave employment at home. The import of goods manufactured abroad was discouraged, for it took money out of the country and provided no work for Englishmen. In 1548 it was lamented that the statutes of Edward IV, excluding all sorts of foreign goods such as woollens, silks, iron, steel, leather, hats, playing cards, tennis balls, and purses, were largely disregarded. It was felt to be unpatriotic and a source of weakness to the country. The fault was not with the English weavers, but with the consumer, who would have foreign-made goods if he could obtain them. 'Now the poorest young man cannot be contented either with a leather girdle, or leather points, gloves, knives, or daggers made near home.' Portia gives her witness to the same thing in *The Merchant of Venice* (for Shakespeare was, of course, only describing the dandy of the day), when she confides to Nerissa her opinion of Falconbridge, the young baron of England: 'How oddly he is suited! I think he bought his doublet in Italy, his round hose in France, his bonnet in Germany, and his behaviour everywhere.' Behaviour did not concern the Policy of Power directly; where a man bought his doublet and hose did. In

Edward VI's reign it was estimated that '20,000 might be set awork within this Realm, and are set awork beyond the sea, with those things that might be made here'—and that enough might be made also for forcign parts, 'as all kind of cloth, kerseys, worsteds, and coverlets, carpets, and tapestry, knitted sleeves, hosen and petticoats, hats, caps, paper both white and brown', and so on. It was in order to have good industries at home that the Government, as soon as the Gilds were destroyed, began a whole scries of enactments to secure an adequate supply of well-trained apprentices. Foreign artisans were encouraged for the same reason. 'In Venice', it was observed, 'that most flourishing city at these days of all Europe, if they may heare of any cunning craftsman in any faculty, they will find the means to allure him to dwell in their city; for it is a wonder to see what a deal of money one good occupier doth bring into a town, though he himself do not gain to his own commodity but a poor living.' New trades, necessary for the strength and well-being of the country, such as pumping mines, brass-founding, and glass-making, were introduced in this way by Cecil. It is doubtful whether we have to-day a better scheme of technical education than was provided by this judicious introduction of skilled artisans and the elaborate system for training apprentices.

AN ENGLISH HATTER

The connecting link of all this policy was the conviction that

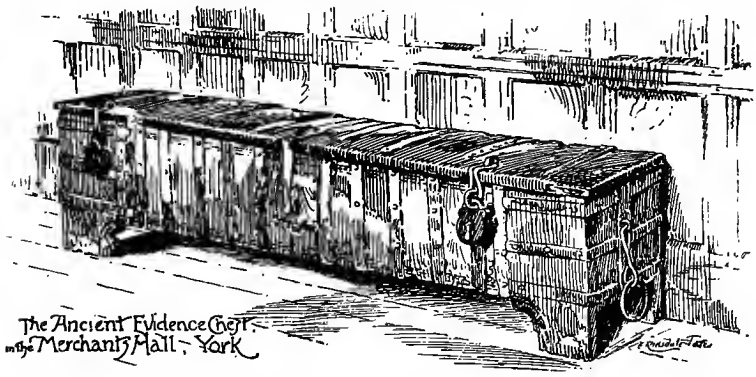
to hold a good supply of money in the country made for strength. 'Bullion' was thought to be the source of power. That is why Henry VII collected it, and the books that call him a miser take a very narrow view of the matter. Before the discovery of silver in the New World the supplies of the precious metals in Europe had fallen very low. Richard II had forbidden the export of gold and silver. Edward IV made it a felony. Great efforts were made to keep the coinage good and to prevent clipping. The prosperity of Elizabeth's reign was launched upon a reissue of the coinage. In the month after the century closed—January 1601—the East Indian Company was resolving 'to maintain the trade of the East Indies, if it be possible, by the transportation and vent of cloth and other native commodities of this Realm, without any money at all, or else so little as may be conveniently tolerated'.

There exists a sixteenth-century classification of trades ranked in ascending order, according to their value in bringing in 'most commodity and treasure to the country'. First there were the vintners, mercers, fustian sellers, haberdashers, grocers, apothecaries, that sell ware made beyond seas. These were held but to exhaust the treasure of the realm by taking money out. Secondly, there were the victuallers, butchers, bakers, brewers, tailors, cordwainers, saddlers, carpenters, joiners, masons, blacksmiths, who neither conveyed money out of the country nor brought it in. They merely caused it to change hands. The third sort were clothiers, cappers, worsted makers, tanners, who brought money into the realm. 'These arts are to be cherished where they are used, and where they be not, they should be set up.' The Government did cherish them—even, in 1680, to the point of enacting that its subjects should be buried in wool.

Such was the Policy of Power or 'Mercantile System'[1] which held its own for 200 years, until Adam Smith, William Pitt, the Manchester School, and the Free Traders advocated other doctrines. Some of its assumptions were false. We know now that it cannot be assumed that all dealings between countries

[1] Also known as the theory of the 'Favourable Balance of Trade'.

are paid for in money. It is now recognized that money cannot flow away from a country altogether, that if there is a shortage of money prices fall; things become cheap and merchants flock over to buy at the low prices, and in this way money returns. When commercial relations are highly developed and trade easy, money, like water, tends to find its own level. But in the sixteenth century commerce was not highly developed. The Mercantile System had its uses and served its day well.[1]



Others of its doctrines are not out of date, and seem to be general laws. In spite of all modern developments in gunnery and armour-plating, a good navy is still dependent upon a good merchant service. And it will not be the fault of the German submarine if, in the next fifty years, England forgets the importance of being able to produce at home a considerable portion of her food supply.

[1] All through the seventeenth century and for the greater part of the eighteenth, protection of the English Woollen Industry was a frequent subject of legislation. The Woollen Industry in Ireland was suppressed, and even Ireland's raw wool was only permitted by law to be exported to England, though large quantities of it were regularly smuggled to France. In the New World the manufacture of cloth was prohibited, and in the New England states, where there were no such staple sources of wealth as the rice and tobacco of the Carolinas, Maryland, and Virginia, the prohibition was not liked. The Dutch West India Company enforced similar restrictions upon their colonies for similar reasons.

CHAPTER V

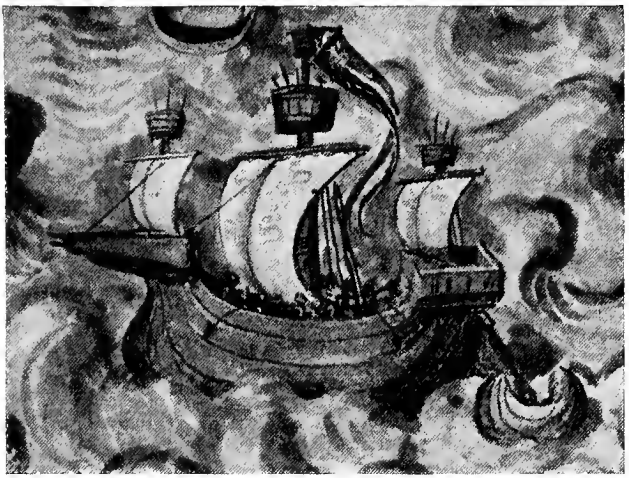
THE DOMESTIC SYSTEM

THERE might have been an Industrial Revolution two hundred years before it actually took place, when fresh supplies of gold and silver from the New World introduced into Europe capital and the capitalist in something of the modern sense of the term. This is plainly shown by the careers of men like John Winchcombe and Stump, 'an exceeding rich clothier'. But their attempts at a 'Factory System' were checked by the Weavers Act of 1555. The reason was that the Government wished to keep men on the land and to prevent the decay of the old cities; in 1557 there was a complaint that persons who 'do use the mistery of clothmaking have set up in villages, and there, occupying the place of an husbandman, do not only engross divers farms but also draw with them out of their cities all kinds of artificers'. There was also probably an idea that a factory system would lead to periods of unemployment and poverty when the demands of the foreign market fluctuated as a result of war: in 1527 the Emperor forbade the import of cloth, and as a result, 'when the clothiers lacked sale, they put from them their spinners, which caused people greatly to murmur'. The problem of poverty, which faced the Government when by the Reformation settlement the Church became merged with the State, was difficult enough for the Tudors without having such additional complications brought in.

The Domestic System, under which the workers combed, spun, and wove under their own roofs, therefore remained and continued unchanged through the seventeenth and eighteenth centuries. This system marked the transition from the Craft-Gild system—in which small masters made things themselves, with the help of a few journeymen and apprentices, and sold their own goods—to the highly organized Factory System which we see around us to-day. Under the Domestic System the craftsman had to a large extent lost his independence. He was a maker,

a ' manufacturer ', but he no longer sold direct to the consumer. He had become a wage-earner, and worked, though in his own house and in his own time, under the direction of another, who was in fact a capitalist.

The domestic system was very widespread over the whole country, but there was great variety. In the west the weavers, for instance, worked for hire. In the north they worked on their own behalf. In the west they owned little land,[1] and some-



A MERCHANTMAN OF THE YEAR 1519

times eked out their living by road-making. In the north ownership of land was more general ; in seasons of unemployment the weaver would work on the land, and often part of his family would work full time on the land. In the eastern counties the textile worker would be glad to do agricultural work in the summer, since it was better paid. In the west the textile wages were double the agricultural. Landowners sometimes encouraged

[1] One witness, giving evidence before the Parliamentary Commission inquiring into the conditions of the industry in the west in 1806, said not one family in twenty ' owned as much land as this room '.

domestic industry by teaching their tenants to spin. On a tablet in the church of Great Mytton, on the borders of Lancashire and Yorkshire, it is recorded that Sir Nicholas Shireburn, then owner of Stonyhurst—now the famous Roman Catholic college—' was a gentleman of great humanity and sympathy and concern for the good of mankind and did many good charitable things

WEAVING IN THE EARLY EIGHTEENTH CENTURY
From a woodcut after Hogarth

while he lived. He particularly set his neighbourhood a spinning of Jersey wool and provided a man to comb the wool and a woman who taught to spin, whom he kept in his house and allotted several rooms he had in one of the courts of Stonyhurst for them to work in, and the neighbours came to spin accordingly. The spinners came every day and spun as long a time as they could spare morning and afternoon from their families. This continued from April 1699 to August 1701. When they had all learned he gave the nearest neighbours each a pound or half a

pound of wool, ready for spinning, and a wheel to set up for themselves, which did a vast deal of good to that Northsyde of Ribble in Lancashire. Sir Nicolas Shireburn died on the 16th December 1717.' There was a counterpart of this at Lynn, where, in 1682, an old chapel was turned by the Corporation into 'a public

THE CUSTOM HOUSE, KING'S LYNN

Receptacle' for poor children to learn to spin wool: 'here they were also taught to read'.

In the West Riding the industry was forging ahead under the encouragement of the two trading companies, the Merchant Adventurers and the Eastland Merchants, who between them controlled the whole North Sea and Baltic market. It is a story of strnggle. At first the Yorkshire cloths—Pennistones, Keighley Whites, Northern Dozens—were very poor. There was much bad workmanship: the cloth was often full of holes, which were

hidden from purchasers by 'flocks' chopped up and rubbed into them. The excessive stretching of the cloth on tenter-frames to make it appear bigger than it was grew so bad that it was complained, 'if a gentleman make a livery for his man, in the first shower of rain it may fit his page', and a statute was passed in 1597 forbidding the use of tenter-frames. The Aulnager had become by this time a mere revenue official, and his supervision had been taken over by Searchers, appointed by the Justices of the Peace; but the justices declined to put this particular statute into practice, knowing that tenters were a necessary part of a clothier's stock-in-trade.

This victory of the clothiers was followed by others. A flood of light is thrown on the growth of the industry in the four parishes of Halifax, Bradford, Bingley, and Keighley by the depositions of the witnesses in three lawsuits in 1613, 1637, and 1676, in which the clothiers, led in 1613 by Robert Lawe and in 1637 by Thomas Lister, petitioned against the Aulnager's claim to raise the fee for sealing a 'Northern Kersey' from a penny to three-halfpence. The Aulnager's point was that three, not four, kerseys had become equal to a Leeds broadcloth, on which the fee was $4\frac{1}{2}d.$ The kerseys were, it is clear, increasing in length as well as improving in quality as the century advanced, and there was room for it. Inferior workmanship, lack of skill and of care in the sorting of wools, and ignorance of dyeing prevented serious competition with the cloth made in the older centres, and were responsible to some extent for fluctuation in the export trade, a matter that hit home and brought improvement. Witness after witness in the 1638 inquiry said the weaving was finer and better than it used to be.

The four parishes claimed that they supplied the customs with £6,000 per annum, which meant an annual production of some 70,000 kerseys, since the amount paid per kersey worked out at about 1*s.* 9*d.* Most of the cloth went abroad—not less than 30,000 kerseys were shipped each year from Hull alone in the years 1633–7, but many found their way to Blackwell Hall in London, and clothiers would record in their wills the number of

DISTAFF AND HAND WHEEL SPINNING

pieces they had stored there under the care of some factor. The population was growing, especially round Shipley in 1637. It was claimed in 1613 that 20,000 persons were set on work in the four parishes named: in 1637 this number had grown to 22,000. Spinners earned 3*d.* a day, but in Keighley 2*d.* in 1637. Fullers could full from 2,500 to 3,000 kerseys a year. A clothier could make perhaps sixty. The wool used was chiefly Lincolnshire and Leicestershire, and in 1637 its price was still rising. There were big clothiers employing weavers and apprentices, but the majority were small men, turning out their kersey a week, and yeomen making cloth as a part-time employment. The clothiers seem to have been proud of themselves, of their monthly contributions to the poor, of the ten preachers Halifax maintained 'over and above the payment of tithes, oblations, and all other duties', and of the fact that there was 'not one Popish Recusant' in the parish. They clearly had some idea of combination: the cost of the suit of 1637 was jointly borne. The evidence of this suit affords a glimpse of two carriers, William Brooke and Edward Northend, who seem to have been stout fellows. In taking kerseys belonging to Thomas Lister and two other Halifax clothiers to London they had put up for the night with their pack-horses at the inn at Wombwell, when the Aulnager's men entered the house 'in a forceable manner' about three o'clock in the morning and began opening divers packs. Brooke and Northend defended their goods, and not until the Aulnager's men were reinforced by the constable of Wombwell were they taken into custody, from which they were not released till they entered into bond to appear before the Privy Council.

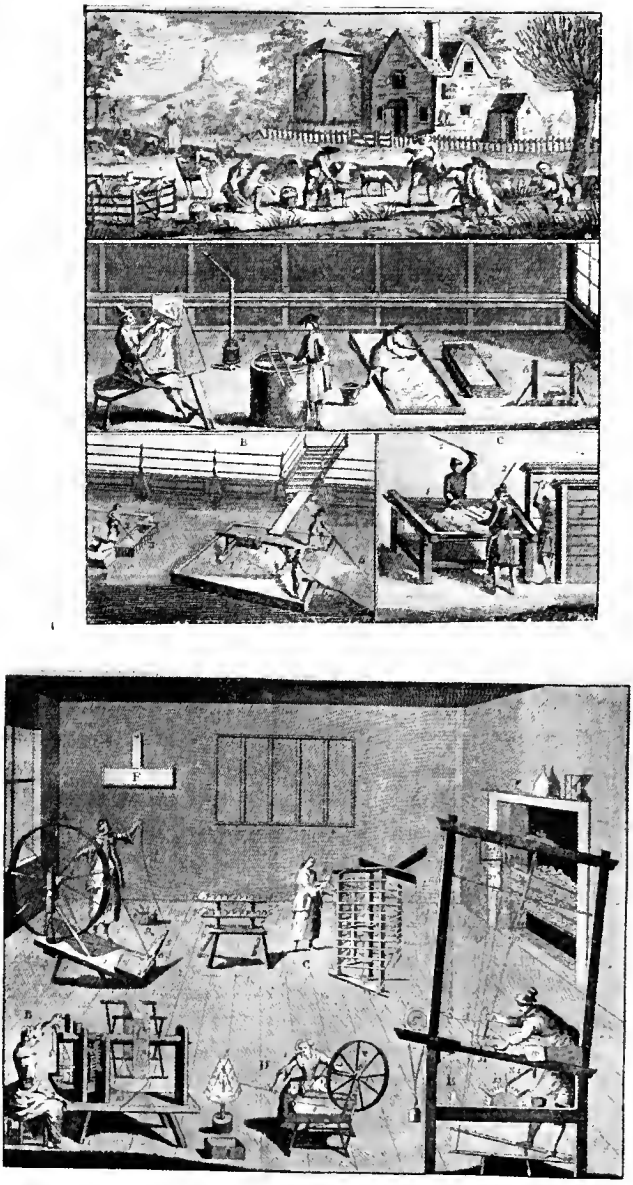
The picture of the domestic system in the West Riding is completed by Defoe, who saw it in 1725, and his account depicts the system at its best. The land round Halifax was 'divided into small enclosures from two acres to six or seven acres each, seldom more, every three or four pieces of land had a house belonging to it: hardly a house was out of speaking distance from another . . . we could see at every house a tenter, and on almost every tenter a piece of cloth. . . . Every clothier keeps

one horse at least to carry his manufactures to the market and every one generally keeps a cow or more for his family. . . . The houses are full of lusty fellows, some at the dye vat, some at the looms: the women and children carding or spinning: all are employed from the youngest to the oldest, not a beggar to be seen nor an idle person.' These Yorkshire clothiers were themselves practical weavers, working with their men; few had more than three or four looms, or employed more than eight to ten persons: they had little capital and depended on their weekly sales. Hence any one with industry could get a loom, buy material on credit, and rise to be a master. This accounted for the good relations which existed between employer and employed. John Harrison, the Leeds philanthropist and the builder of St. John's Church, Briggate, who employed weavers on a larger scale, was an exception to the ordinary type of Yorkshire clothier.

In the west the industry was organized on a much more capitalistic basis: the clothiers were 'gentlemen clothiers'—employers pure and simple—and they did bigger business than their brethren in the north. They employed 30–40 looms or more, some as many as 250. Defoe stated that in Bradford-on-Avon clothiers worth from ten to forty thousand pounds were not uncommon. It was only a question of the number of weavers available in the immediate district, within a radius of about ten miles. These weavers would be hired under a contract with the clothier to weave into cloth the yarn which he supplied. When they took back the cloth, they received their payment; and they might work for several clothiers at once.

But there was another side to the picture, as Defoe admits. Even in the flourishing Yorkshire cloth industry 'all were employed, from the youngest to the oldest; scarce anything above four years old but its hands were sufficient for its own support'.[1] The hours were long: a 14-hour day (including meals) was normal; and in Wiltshire in 1803 the hours were 5 a.m. to

[1] Defoe records similar child labour in the woollen manufacture at Taunton and Colchester.



WOOLLEN MANUFACTURE IN 1749
Sheep-shearing ; Washing ; Beating ; Wool Combing ;
Spinning ; Warping ; Weaving

7 p.m. in winter, and from 4 a.m. to 9 p.m. in summer. Everywhere the Truck System prevailed by which men were paid not in money but in cheques which had to be spent at shops which the employer owned and where he charged what he liked for inferior goods. Unemployment was more frequent than in other trades, since the market was wider, and therefore the risk of commercial crises greater. The middleman-clothier was absolute: the workers were too scattered to unite, and if they refused to work for what the one clothier chose to give them, there might be no chance to work for another; and without this work they could not live. The weavers were never strongly organized like the wool combers: they were more scattered, and they were tied by tradition, as well as by their work, to their own locality. In 1754 there was a strike of 300 wool weavers at Norwich. In 1756 we read of a complaint by the weavers of Stroud, Painswick, Wotton, and Dursley that the regulations laid down by the justices as to wages were not being kept by the masters. The rate was calculated on a bar containing 600 threads: this the masters had increased to 900. Consequently the weavers could only earn 4*d*. by working 14 hours. The masters pleaded the necessity of lowering wages to meet French competition, and got Parliament to forbid the fixing of wages. 'All will allow', says Fielding, 'that the poor are now ill provided for and worse governed: their sufferings are less observed than their misdeeds. They starve and freeze among themselves, but beg and rob, and steal among their betters.' That the Industrial Revolution caused much misery and distress is obvious; it must in fairness be remembered that this misery was no new thing.

Though the processes through which the wool passed were carried out chiefly in the homes of the workers and with simple tools and appliances that had changed little since the fourteenth century, there was considerable division of labour.[1] After shearing, the fleece had to be sorted. It was then roughly

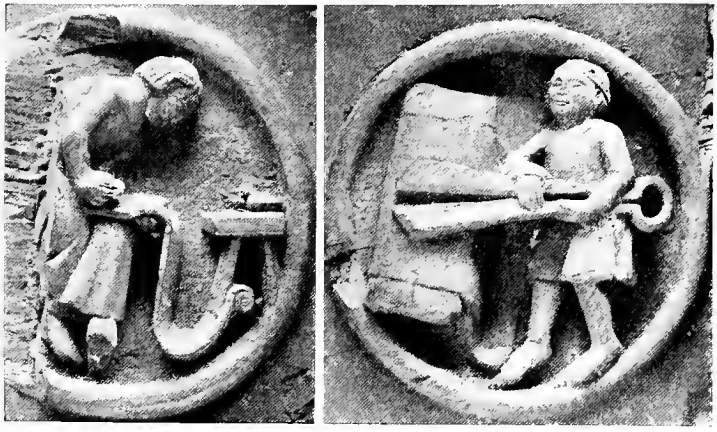
[1] The invention of the loom and the distaff is lost in antiquity. As Gibbon observed (*Decline and Fall*, ch. xl) it 'has been piously ascribed to the gods.'

cleaned and often dyed. The leaden dye-vat sometimes stood outside the clothier's door: sometimes there was a dye-house. After dyeing came the oiling, the wool being placed on the floor and oiled layer by layer. A further sorting then took place, and the shorter wool was carded while the longer wool was combed. The cards were two boards with handles, like large-sized butter-pats, having on one side leather coverings studded with iron teeth. The purpose of carding was to work the wool up into a fluffy mass ready for the spinner.

The object of combing was different. The comb was designed to comb out the short fibres, leaving the long ones. It was shaped like a rake, only it had five or six sets of teeth instead of one set, the row farthest from the handle being the longest. Two combs were used: one was fixed to a post, and the wool was put or 'lashed' on to it, the other was pulled several times over it. What made combing an unhealthy employment was the need for heating the combs, so as to keep the wool flexible. Charcoal stoves, called comb-pots, were used, and the fumes reacted on the workers. It was a sociable occupation: three or four combers usually shared a stove, which was known in Yorkshire as a 'pot of three' or a 'pot of four'. So general was this practice that a 'pot of one' became a byword for a surly, unsociable person.

Until the end of the eighteenth century spinning was done on the spinning-wheel, or even on the old distaff and spindle, which was called by Ben Jonson and Dryden the 'rock'. The name 'rock' was by no means extinct in the eighteenth century. In his *Dictionary* Dr. Johnson defines the spinning-wheel as 'the wheel by which, since the disuse of the rock, the thread is drawn'. The supply of thread was always short of the demand, and consequently every woman was a spinster. The use of the word 'spinster' to-day to denote an unmarried woman, and of 'the distaff side' to denote the female side, proves how universal an employment for women spinning must have been. It was a slow process, and good work had been done if a pound's weight of yarn was turned out in a day. It took ten spinners to supply one weaver.

When the wool was spun the yarn was returned to the clothier, who sent it to the weaver. The loom, on which yarn was woven into cloth, was a heavy instrument with a frame on which the threads of the warp were stretched, and fitted with treadles and levers to raise and lower alternate threads, so that the shuttle, on which the woof was wound, might pass between them. The simplest illustration of the process of weaving is darning. In darning, as the cross-threads are put in, the needle (which corre-



FOLDING CLOTH CUTTING CLOTH
Archaeological Museum, Cambridge

sponds to the shuttle in weaving) is passed under the first and over the second of the other threads, and so on. On the old hand-looms each of the warp-threads was passed through the loop of a vertical thread, and these vertical threads were tied to a pair of lathes that were worked by treadles. One treadle raised all the even numbers among the warp-threads and lowered the odd numbers. After the shuttle carrying the weft had been thrown across, the other treadle would be pressed down, and the even numbers would be lowered and the odd numbers raised, ready for the next throw of the shuttle. The weaver thus had both his feet and one of his hands occupied. The other hand

he employed to pull the 'reed'—the comb in which the parallel threads of the warp lay—gradually towards him, thus keeping the cloth close and compact. In many homes the constant clicking of the clumsy frame, as each thread was pressed into its place, must have been as familiar as the ticking of the clock has become to-day. The work was heavy, and more often done by men than by women. All the same, contemporary descriptions of weaving, as well as contemporary pictures, retain the

WOMAN WITH A 'ROCK' OR DISTAFF
From the Miserere stall in Fairford Church

note of cheerfulness that illumines Deloney's pages of the previous century. Here is one published in 1641:

> The weaver next doth warp and weave the chain,
> Whilst Puss his cat stands mewing for a skein;
> But he, laborious with his hands and heels,
> Forgets his cat and cries, 'Come, boy, with quills.'

Quills were the refills for the shuttle: the woof was wound on to them.

When woven the cloth was next cleared of lumps and loose ends: this process was known as 'burling'. It was then sent to the fulling-mill to be 'fulled'. Here it was scoured with fullers' earth, and then soaked and beaten with hammers to thicken it. Long ago this fulling was the only process that was done in a mill. It was done at first by the feet: the cloth was

put into a trough and walked upon, as grapes were to make wine. So a fuller was often known as a 'walker'. In the thirteenth century an improvement was made in this method and the cloth was beaten by large wooden mallets worked up and down by a water-wheel. The fulling mill would stand by a stream,

> Where tumbling waters turn enormous wheels,
> Whose hammers, rising and descending, learn
> To imitate the industry of man.

Bradford had a fulling mill in 1311, which stood side by side with the corn-mill. But their use was not common till about the time of Henry VI. Cirencester built two fulling mills in the early years of Henry VIII's reign. The distinction which arose between the manufactures of the west and of East Anglia is probably due to the latter's lack of water-power to drive the fulling mill. The eastern counties turned early to the manufacture of worsteds, which do not require to be fulled, and developed great variety—damasks, moreens, calimancoes, for example, in pure worsteds, as well as mixed fabrics like bombazines, crapes, and poplins.[1]

After the fulling the cloth was hung out on tenters to dry and to be stretched. It was then passed to the 'rower', who roughened its surface with teasels, so that the 'shearman' could shear the nap off smooth. This was done with heavy shears, weighing thirty or forty pounds: it was said that a shearman or cropper could always be recognized by the mark of the shears on his right hand. But as a rule the cloth went straight from the tenter to the market: the finishing processes would be done after it was sold, under the direction of the buyer.

In the cottages one or other of these processes would be carried out and the product passed on for the next stage. In such homes the work would be done in the living-room, or in a shed attached.

[1] It is true that in the Stour Valley baizes, kerseys, and serges were made. But these, though of the woollen type, were rather scoured than 'milled' in the West Country sense of the term. The Sudbury (Suffolk) serges were not cloth serges of the Devonshire and Wellington (Somerset) type.

But many houses were larger: advertisements are found from 1725 onwards of houses to let in Yorkshire that had 'all conveniences proper to a cloth-maker'—loom-shop, dye-house, tenters, and outhouses complete. In the north few cottages were without their piece of land: there was an Elizabethan statute, not then repealed, which laid it down that no cottage was to have less than four acres of land.

The drawbacks to the domestic system are obvious. Carrying the wool in different stages of preparation backwards and forwards to the homes of the workers involved waste both of time and of money; with workers scattered over the countryside adequate supervision was impossible; without effective supervision uniformity of standard could not be secured; with workers dispersed and working at piece-work in their own time it was practically impossible for the clothier so to organize his workers that he was in a position to respond to any sudden expansion of the market.

To the worker, on the other hand, the great advantage of the domestic system was its comparative freedom. No doubt it was necessary to work long hours—Silas Marner worked long hours. Wages were low. Work was often irregular. Whole families worked. Child labour was no product of the Industrial Revolution: it began far earlier. But children worked under the eye of their parents, not under that of the overseer. The family was concentrated under one roof. The work was carried out amid rural surroundings. To a certain extent the worker was already employed by the capitalist, but there was no factory bell—no tyranny of the machine which has to run certain hours and be tended all those hours. When a man was tired of his loom he could stretch his limbs and go out and dig his potatoes. He was, under the domestic system, still master of his own time and had retained some power of control over his own life. He was a man with a share, however small, in the State. The framework-knitters of Leicester, for example, had 'a garden, a barrel of home-brewed ale, a week-day suit of clothes and one for Sundays, and plenty of leisure'. In several cases at all events the domestic

system had really been 'contentment spinning at the cottage door': Wordsworth gives a picture of it in *The Brothers*:

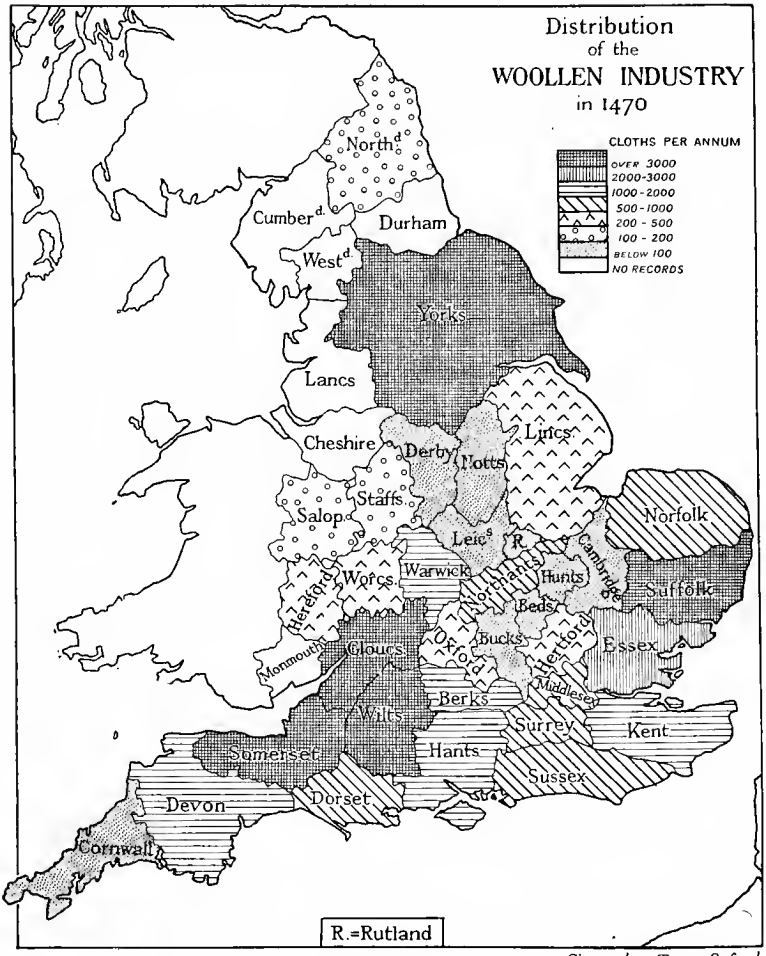
> It was a July evening; and he sate
> Upon the long stone-seat beneath the eaves
> Of his old cottage,—as it chanced that day,
> Employed in winter's work. Upon the stone
> His wife sate near him, teasing matted wool,
> While, from the twin cards toothed with glittering wire,
> He fed the spindle of his youngest child,
> Who, in the open air, with due accord
> Of busy hands and back-and-forward steps,
> Her large round wheel was turning.

It was a life hard but not unhealthy, and 'Merry England' had not yet become a mockery.

It is a changed countryside that Wordsworth depicts in Book VIII of *The Excursion*, after the advent of the factory system:

> The habitations empty! or perchance
> The Mother left alone,—no helping hand
> To rock the cradle of her peevish babe;
> No daughters round her, busy at the wheel,
> Or in dispatch of each day's little growth
> Of household occupation; no nice arts
> Of needle-work; no bustle at the fire,
> Where once the dinner was prepared with pride;
> Nothing to speed the day, or cheer the mind;
> Nothing to praise, to teach, or to command!
> The Father, if perchance he still retain
> His old employments, goes to field or wood
> No longer led or followed by the sons;
> Idlers perchance they were,—but in *his* sight;
> Breathing fresh air and treading the green earth:
> Till their short holiday of childhood ceased,
> Ne'er to return! That birthright now is lost.

As long as the domestic system held its own the woollen industry continued to be widely distributed over the whole country; it flourished most in the counties where, according to the Aulnage returns, it had prospered in the time of Edward IV. The reason was partly geographical. Though sheep will live



Clarendon Press, Oxford

This map has been constructed from the Aulnage Returns. Probably the low position of Norfolk is to be explained by the fact that it was already giving much of its attention to worsted, and worsted cloths did not pay subsidy. No returns were made for Cumberland, Durham, Westmorland, Lancashire, and Cheshire, where the manufacture was either only for home consumption, or of such low quality as to be exempt from subsidy.

almost anywhere, there are certain types of country where they flourish best ; and it is the nature of the soil that makes the difference. When in the eighteenth century Sir Joseph Banks started experiments for George III to try to improve the breed of sheep, so as to produce softer and finer wool, he found that if sheep of good breed were put on unsuitable soil, e. g. merino sheep in Essex, the wool deteriorated, while sheep of poor breed on suitable soil began to produce better wool. The two kinds of soil that sheep like best are oolitic and chalky : these are found generally on the higher ground, where primitive man lived, well above the swamps and forests, the haunts of wolves and other savage animals. Nor were these hill-tops suited for the farming of later men.

A glance at a geological map of England shows that south-east of a line running from the Tees to the Severn practically all the land is oolitic or chalky, except round the Wash, parts of the Thames Valley, Essex, south-east Suffolk, and the district round the Solent. Of all this country, the Yorkshire Moors, Lincoln Edge, Nottinghamshire, Leicestershire, Warwickshire, the Cotswolds, and eastern Somersetshire down to Exeter, are oolitic. The Lincoln Wolds, Norfolk, and west Suffolk, the Chiltern Hills, and the North and South Downs, are chalky. These are the districts where, in general, sheep have flourished best.

A very good idea of the distribution of the industry can be got from the ' Itinerary ' of Leland who was Keeper of Libraries to Henry VIII. In 1546 he obtained the King's commission to search the libraries of monasteries and colleges for ancient manuscripts. This led him to travel for six years over the greater part of England. He kept careful notes, topographical and antiquarian, of the places he visited, and his Itinerary is thus a mine of information on sixteenth-century England. He makes the same remark about nearly all the small towns of Wiltshire, Gloucestershire, and Somerset : ' All the town of Bradford-on-Avon [1] standeth by cloth making ' ; Steeple Ashton in Wiltshire

[1] The town, now a centre for the manufacture of motor tyres, is full of reminiscences of its past greatness as a wool centre : Horse Street, named

'standeth much by clothiers, and Rob. Longe, clothier, builded the North Isle of the Church, and Walter Lucas, clothier, the South Isle, at their proper charges'. In Somerset the industry did not seem quite so prosperous: at Wells, for instance, and Chew Magna 'there *hath been* good making of cloth in the town'. But in Gloucestershire village after village, e. g. Dursley and Wotton, is mentioned as 'a praty clothing town, well occupied with clothiers'. There are exceptions—e. g. Thornbury and Berkeley, where 'There *hath been* good clothing': this perhaps was due to the fact that they lay more in the plain and lacked some of the advantages of water that the other places, situated in the hills, possessed.

Bristol and Southampton were the great ports for South France, Spain, and Italy: to Southampton came the great Venetian trading fleet twice a year, with all the products of the east, to be exchanged for the fine dyed cloths of the west of England. During the fifteenth century the export trade of England steadily developed, and her merchants proved more than a match for the Hanseatic League, which they managed to get finally suppressed under Elizabeth; commercial agreements were made with Castile, with Aragon, and with Florence; and so many English traders were resident at Lisbon that, at least by 1471, they had their own chapel there. To Bristol also came merino wool from Spain. In 1567 125¾ hundred pounds weight of Spanish wool was imported by the clothiers of Gloucestershire.

Of the western counties engaged in the woollen industry Gloucestershire was becoming the most prominent. Drayton in his *Polyolbion*, a sort of rhymed Gazetteer of England, has a special work of praise for the whiteness of the Cotswold sheep,

> Whose browes so woolly be
> That men in her fair sheepe no emptiness should see;

from an old inn 'The Scribbling Horse' or Herse—a frame on which the cloth was stretched to be 'scribbled' or cleansed of impurities. Pippet Street possibly a corruption of Pie Powder, denoting that the town fair was held there. Kingston House, built about 1590 by John Hall, the wool merchant, was reproduced as the English Pavilion at the Paris Exhibition as the best example of an Elizabethan House.

The staple deep and thick, through to the very graine,
Most strongly keepeth out the violentest rain ;
And of a fleecie face the flank doth nothing lack
But everywhere is stored, the belly and the back,
As white as winter's snowe ;

likewise for the village games—such as the famous ones on Dover's cliff at Chipping Campden, in which local tradition says Shakespeare took part—appropriate to the reputation for jollity which has always been associated with the shepherd's life :

The Shepherd king,
Whose flock hath chanced that year the earliest lamb to bring,
In his gay baldric sits at his low grassie bord
With flowers, curds, clouted cream and country dainties stored ;
And whilst the bag-pipe plays each lustie jocund swaine
Quaffs sillabuds in kans, to all upon the plaine,
And to their country sisters, whose nosegays they doe weave ;
Some roundelays doe sing ; the rest the burden beare.

Exact evidence as to the number of men employed in the industry in Gloucestershire, and of its distribution over the county, is to be found in *The Return of Men and Armour for Gloucestershire in 1608*, the sub-title of which explains its contents: ' The Names and Surnames of all the Able and Sufficient Men in Body fit for His Majesty's Service in the Wars, within the County of Gloucester, viewed by the Right Hon. Henry, Lord Berkeley, Lord Lieutenant of the said County, in the month of August, 1608, in the sixth year of the Reign of James the First.' It is thus almost contemporaneous with the Authorized Version of the Bible, which was issued in 1611. John Smith of North Nibley, barrister, compiled the Return, and his own name is in it. There is a record of the name, occupation, or description of each person in the county capable of bearing arms. The Return indicates the age of each, whether ' about twenty ' or ' about forty ', or ' between fifty and fourscore ' ; and also his category : whether he is ' of the tallest stature, fit to make a pikeman ', or ' of a middle stature, fit to make a musketeer ', or ' of a lower stature, fit to serve with a caliver ', or merely ' of the meanest stature, either fit for a pioneer or of little other use '. More important,

it shows the trade of each man. The Return has been printed, and has an index of places and another of surnames, but it has not been analysed in trades, nor has the evidence the medical categories furnish been sifted; it should be useful in showing which trades seemed to produce the best physique. A cursory examination of the Return, however, shows that weavers were plentiful in Gloucestershire. There were 'brode-weavers' at St. Briavels, Flaxley, and Newent in the Forest of Dean; shearers, clothworkers, and weavers at Winchcombe, Chipping Campden, and Marston Sicca; feltmakers at Tewkesbury. There were quite a number of weavers in the now tiny village of Cromhall. The whole trade at Cam, Coaley, Stinchcombe, Dursley, Uley, Woodmancote, Combe, North Nibley, and the villages round seems to have been 'brode-weaving' There were many weavers at Tortworth, Old Sodbury, Chipping Sodbury, Westerleigh, Yate, and Charfield. Cirencester had its Dyers' Street, which exists to-day, and a great number of clothiers, weavers, tailors, and cardmakers. But, except for Lechlade, the trade does not seem to have spread much into the villages round: Fairford had but two weavers; Northleach but five, though it had also cardmakers and tailors. There was a very active centre round Woodchester, 'Michell Hampton', Rodborough, Horsley, Avening, Nailsworth, Tetbury, Bisley, and 'Packenhill': Upper and Nether Lyppiatt, King's Stanley, Leonard Stanley, and Eastington had a very large proportion of 'clothmen' and 'brode-weavers'. Stroud does not appear in the inventory.

Stroud's importance, however, was not overlooked by the Stuarts, as the following letter from Charles I to Prince Rupert proves:

'(Signed) Charles R.

'Most trusty and entirely beloved Nephew Wee greet you well Whereas Wee are credibly informed that at Cirencester Stroud Minchinhampton Tetbury Dursley Wotton underedge and Chipping Sudbury great quantities of cloth canvas & Locherame[1] are to be had for supplying ye great necessities Our Souldiers have of Suits, Wee have thought good to adver-

[1] i.e. Lockram, 'a sort of coarse cloth', JOHNSON. Cf. *Coriolanus*, II. i. 228.

tize you thereof And doe hereby pray you to send a competent party of Horse under ye coñand of some able person to visit those severall places, wch lye not farr asunder, and to bring from thence all such cloth canvasse and Locherame as they shall find there to Cirencester, Giving a Ticket to ye Owners for all ye parcells they shall take up and keeping a perfect Accompt thereof, and from what persons ye same was taken wth this intimation that every of them shall upon his repaire to Oxford receave such Security for his coñodity as hee shall have noe cause to except against. For ye better ordering and managing of this Service Wee shall expressly send Mr Nevill Mr Bradburne & Mr Ball men of experience, to take order for receaving and putting up of ye cloth whereof Wee intend ye best shall be reserved for ye service of our Troopers and ye rest for ye Dragoons & Foot of Our Army. In this we pray you to use yor wonted diligence. And bid you heartily farewell. Given at our Court at Oxford ye first day of February 1642.[1] [i.e. 1643: the year ending March 25th.]

'P. Rupert.'

When the sixteenth century opened there was a temporary decline of the industry in Norfolk. This is more easily seen by looking at the assessments of English towns for purposes of taxation. This assessment shows their wealth and consequent prosperity. In 1341 London (excluding Middlesex) was rated at a quarter of the amount Norfolk was required to pay. London was the wealthiest, Norwich the second city, in the kingdom: London was ten times richer than York and eight times richer than Bristol. By 1453 the order of the towns is London, York, Norwich, Coventry, Hull, Lincoln, Southampton. London is 9½ times as rich as Norwich, and 15 times as rich as Coventry—though it is only fair to remember that York was the head-quarters of the Yorkists, and Coventry of the Lancastrians, which fact doubtless helped to account for their relative importance. By 1503 Bristol has risen to second place, Gloucester to fourth place; York is third and Norwich has fallen to fifth. London is 3¾ times as rich as Bristol, 6 times as rich as Gloucester, 7½ times as rich

[1] For permission to use this letter, which, it is believed, is now printed for the first time, acknowledgement is made to the directors of Messrs. Strachan & Co., Ltd., Lodgemore Mills, Stroud.

as Norwich, and 9 times as rich as Coventry. The numbers of the population—so far as they can be estimated—tell the same tale. In 1377 London had 35,000 : York 11,000 : Bristol 9,500 : Coventry 7,000 : Norwich 6,000 : Lincoln 5,000. By 1536 Norwich had sunk to twenty-sixth place on the list. The opening up of the New World was giving the western ports their chance ; and when Alva's persecutions in the Netherlands drove a fresh influx of skilled Flemish weavers to England, Elizabeth was glad to take the opportunity of reviving the trade in the eastern counties. In 1565 the Mayor and Corporation of Norwich obtained leave to have some of these strangers settled in the town, where the weaving industry was decaying : thirty households were settled there, and as a result, not only were the old houses repaired but new ones had to be built, and the town recovered its former prosperity. The same thing happened at Colchester, Halstead, Lynn, and Dover. New types of cloth were woven, mostly of a finer kind ; and by this means the trade in the eastern counties received a new lease of life.

In the early years of the seventeenth century a period of distress began : we read of petitions to the justices for work, and of complaints by the clothiers of the high price of wool and of the monopoly of the export trade by the Merchant Adventurers who, in order to keep up the price, would not take enough cloth off the manufacturers. There were 1,500 looms in Gloucestershire at this time, and 2,400 persons employed ; but work was not at all regular. The Civil War hit those engaged in the cloth trade very hard : they took an active part in it, and one Paine [1],

[1] There is a tablet to this gallant clothier on the wall of Cirencester Parish Church.

Here lyeth buried ye body of Hodgkinson
Paine, clothier, who died ye 3rd of Feb. 1642.
The poore's supplie his life & calling gract,
till warres made rent & PAINE from poore displact.
But what made poore unfortunate, PAINE blest ;
by warre they lost theire PAINE, yet found no rest.
Hee, looseing quiet by warre, yet gained ease ;
by it PAINE'S life began and paines did cease,
And from ye troubles here him God did sever,
by death to life, by warre to peace for ever

a clothier who fell with the Colours in his hand, proved once more that the proverb about tailors was a libel. When the war was over the clothiers of Stroud complained they were 'utterly undone'. But when things settled down after the Restoration trade rapidly improved, and the period 1690–1760 was perhaps the period of greatest prosperity both in the west and in Norfolk. 'Norwich', wrote Macaulay in his third chapter, which describes England in 1685, 'was the capital of a large and fruitful province. It was the chief seat of the chief manufacture of the realm. No place in the kingdom, except the capital and the Universities, had more attractions for the curious. The library, the museum, the aviary, and the botanical garden of Sir Thomas Browne, were thought by Fellows of the Royal Society well worthy of a long pilgrimage. Norwich had also a court in miniature. In the heart of the city stood an old palace of the Dukes of Norfolk, said to be the largest town house in the kingdom out of London. In this mansion . . . the noble family of Howard frequently resided, and kept a state resembling that of petty sovereigns. Drink was served to guests in goblets of pure gold. The very tongs and shovels were of silver. When the Duke of Norfolk came to Norwich he was greeted like a king returning to his capital . . . and the Mayor and Aldermen waited on their illustrious fellow citizen with complimentary addresses.'

A table published in 1655 gives a rough idea of the distribution of the woollen industry, and shows how widely it was spread over the whole country.

East	Norfolk	Norwich Fustians
	Suffolk	Sudbury Bayes
	Essex	Colchester Bayes and Serges
	Kent	Kentish Broadcloths
West	Devonshire	Kerseys
	Gloucestershire, Worcestershire	Cloth
	Wales	Welsh Friezes
North	Westmorland	Kendal Cloth
	Lancashire	Manchester Cotton[1]
	Yorkshire	Halifax Cloths

[1] Cotton, in the modern meaning of the term, was just beginning to be

South	. Somersetshire	.	Taunton Serges
	Hampshire Berkshire Sussex	.	Cloth

This list is probably far from complete. It makes no mention, for instance, of Wiltshire, with its important centre Bradford-on-Avon, or of the large trade in Welsh flannels which was beginning to grow up round Welshpool and Shrewsbury.

For a century Norfolk and the west continued to be the principal centres, while the West Riding with Halifax as its centre was growing in importance. In the western clothing field the towns stood 'thin' and were 'interspersed with a very great number of villages, hamlets, and scattered houses, in which, generally speaking, the spinning work of all this manufacture is performed by the poor people; the master-clothiers, who generally live in the greater towns, sending out the wool weekly to their houses, by their servants and horses; and, at the same time, bringing back the yarn that they have spun and fitted for the loom'. Thus Defoe described the western centre of the trade in 1725. His enthusiasm over the eastern centre, Norfolk, where 'we see a Face of Diligence spread over the whole country', and where 'the vast manufactures carried on chiefly by the Norwich weavers employ all the country round in spinning yarn for them', has a pathos of its own. The days of its glory were soon to pass away, but meanwhile it basked in the sunshine of prosperity. One hundred and twenty thousand people were busied in the woollen and silk manufactures of Norwich alone. If a stranger were to ride through it on ordinary days he would think it a city without inhabitants, so busy were they at their work 'in their garrets at their looms, and in their combing-shops, as they call them, twisting-mills and other workhouses'. The walls of the city took in more ground than the city of London. In the area between it and the borders of Suffolk, 'which is not

used at this time. The cotton wool was brought from Cyprus and Smyrna. Early 'cottons' were mixed with wool or linen; until Arkwright's water-frame was in use cotton strong enough for the warp could not be spun.

above 22 miles in breadth', were no less than twelve market-towns:

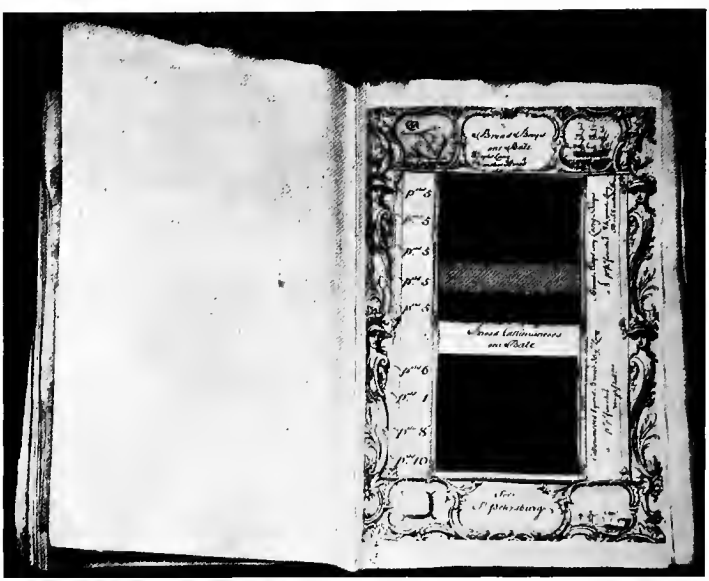
'Thetford	Hingham	Harleston
Dis	West-Deerham	East-Deerham
Harling	Attleborough	Watton
Bucknam	Windham	Loddon.'

In Yarmouth, the port of Norwich, 'the ships ride so close . . . that for half a mile together they go across the stream with their bowsprits over the land, so that one may walk from ship to ship as on a floating bridge, all along by the shore side'. The quay is 'so spacious and wide that in some places it is near 100 yards from the houses to the wharf', while the merchants' houses looked 'like little palaces, rather than the dwelling houses of private men'.

Two facts help to account for the prosperity of the trade from 1690 to 1760. The Dutch wars of the seventeenth century had given a great impetus to the English export trade, and our victories in the French wars, so frequent during the eighteenth century, removed a serious competitor. We find complaints that, when England was at peace with France and the French could get English wool, cloth manufacture declined. By 1753 'that busy nation' had 'beaten us out of a large part of the Levant or Turkey trade, by the light thin cloths which they make', and Yorkshire was trying to recover this branch of the trade.[1] The growing of turnips on a considerable scale from 1740 onwards made it possible to keep larger flocks, since it provided food for them when grass was scarce. But even so the local supply of wool was not enough, and it had to be bought up from all directions. At the ancient fair for Cotswold sheep held at Stow-on-the-Wold some '20,000 sheep are generally sold at one fair', and in the early eighteenth century there were said to have been 400,000 sheep in Gloucestershire alone. But Stroud itself needed two to three million fleeces in the year, and waggons and pack-horses poured into Cirencester from the Mid-

[1] Passage added to the fifth edition, published 1753, of Defoe's *Tour*, vol. ii, p. 37.

lands, and from Kent, and wool came overseas from Ireland and Spain.[1] Devonshire was the great centre for the manufacture of serges—'a trade too great to be described in miniature'. 'It takes up the whole county, which is the largest and most populous in England, Yorkshire excepted.'[2] The Serge-Market at Exeter



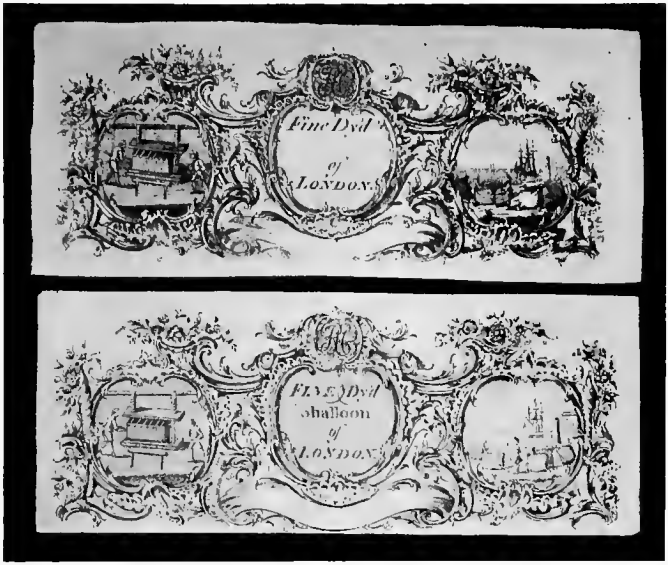
PATTERN BOOK IN USE ABOUT 1740

was well worth a stranger's seeing, and, next to the Brigg Market at Leeds, the greatest in England; Exeter also shipped large quanti-

[1] In the church at Uley, a village near Dursley in Gloucestershire, there is a tablet to John Eyles, who died about 1720, aged 91, and whose house bears his initials and the date 1665, recording that he was 'ye first that ever made Spanish Cloath in ys Psh'.

[2] The centres of the Devonshire industry were numerous, but small and isolated. There were none of marked and outstanding importance as in East Anglia or in the broad-cloth area. The hills of Devonshire are broken and irregular, and the valleys isolated in consequence. Devonshire also imported a considerable proportion of its wool from Ireland.

ties of woollen goods to Holland, Portugal, Spain, and Italy, not only from 'in and about Exeter' but from Crediton, Honiton, Tiverton, Cullompton, and all the north-east part of the county. One of the Devon clothiers was Peter Blundell, 'who built the Free School at Tiverton and endowed it very handsomely.'



FROM A PATTERN BOOK IN USE ABOUT 1740

By the middle of the eighteenth century the transference of the industry from the eastern counties, and to a lesser extent from the west, to the West Riding of Yorkshire had begun. But the picture that Defoe gives in *The Complete English Tradesman* of the woollen industry twenty-five years earlier shows that Yorkshire could not then claim to be the chief seat of the industry.

'The weavers of Norwich and of the ports adjacent send exceeding great quantities of wool into remote counties to be spun, besides what they spin in both those populous counties

of Norfolk and Suffolk. . . . Besides they send a very great quantity of wool 150 miles by land carriage to the North as far as Westmorland, to be spun . . . and a great quantity of yarn is brought ready spun, from Ireland. . . . The western parts of England, superior both in manufactures and in number of people also, are not to be supplied either with wool or with spinning among themselves, notwithstanding the prodigious number of sheep fed upon these almost boundless downs and notwithstanding the large and most populous counties of Wilts, Somerset, Gloucester and Devon in which, the manufacture being so exceedingly great, all the women inhabitants may be supposed to be thoroughly employed in spinning the yarn for them, and in which counties are besides the populous cities of Exeter, Salisbury, Wells, Bath, Bristol, and Gloucester; I say besides these, the greatest towns and the greatest number of them that any other part of the whole Kingdom of Great Britain can show, some of which exceed even the great towns of Leeds, Wakefield, Sheffield, etc. in the North; such as Taunton, Devizes, Tiverton, Crediton, Bradford, Trowbridge, Westbury, Frome, Stroud, Biddeford, Barnstaple, Dartmouth, Bridgewater, Mynhead, Poole, Weymouth, Dorchester, Blandford, Wimbourn, Sherbourne, Cirencester, Honiton, Warminster, Tewksbury, Tedbury, Malmesbury, and abundance of others, too many to be set down; all which I mention, because those who pretend to have calculated the numbers of people employed in these four counties assure me that there are not so few as a million of people constantly employed there in spinning and weaving for the woollen manufacture only; that besides the great cities, towns, and seaports mentioned above there are not less than 120 market towns, six large cities and 1,500 parishes some of which are exceeding full of people.

'And yet notwithstanding all this, such is the greatness of this prodigious manufacture that they are said to take yearly 30,000 packs of wool and 25,000 packs of yarn ready spun from Ireland.

'From thence take a short view of the middle part of England: Leicester, Northampton and Warwick shires have a prodigious number of large sheep. The wool is brought every week, Tuesday and Friday, to the market at Cirencester, on the edge of Gloucester and Wilts; the quantity is supposed to be at least 500 packs of wool per week. Here it is bought by the woolcombers and carders of Tedbury, Malmesbury, and the towns on all that side of Wilts and Gloucester, besides what the clothiers

themselves buy; and having made the yarn they supply that manufacture as far as Frome, Warminster, and Taunton; and thus the West Country is furnished.'

In his *Tour*, dated 1724–7, Defoe gives an interesting description of his journey to Halifax, then the centre of the Yorkshire woollen industry, which shows some of the difficulties under which the trade in the West Riding was carried on, as well as the great developments which were taking place in it.

'Though the sun shone when we came out of the town of Rochdale, yet when we began to mount the hills about a mile from it, we found the wind rise and the higher we went the more it increased upon us. And so we were obliged, in a most discouraging manner, to travel through trackless drifts of snow, and it continuing snowing too in our faces, over Blackstone Edge we knew not whether we were right or wrong till we perceived some landmarks, which the honest Rochdale men had told us of, which gave us great comfort.

'But after we had passed this dismal edge it was our constant labour, as soon as we were at the top of an hill to come down it again on the other side, and then another hill arose. I do not remember that there was one bottom that had any considerable breadth of plain ground in it, but always a brook in the valley running from these gulls and deeps between the hills; and it was observable that they always crossed our way in the bottoms from the right hand to the left.

'From Blackstone edge to Halifax is eight miles, and all the way except from Sowerby to Halifax is thus up hill and down; so that I suppose we mounted up to the clouds and descended to the water level about eight times in that little part of the journey.

'But now I must observe to you that after we had passed the second hill and come down into the valley again, and so still the nearer we came to Halifax we found the houses thicker and the villages greater in every bottom; and not only so but the sides of the hills which were very steep everyway were spread with houses; for the land being divided into small enclosures from two acres to six or seven each, seldom more, every three or four pieces of land had an house belonging to them.

'In short, after we had mounted the third hill we found the country one continued village, though every way mountainous, hardly an house standing out of a speaking distance from

another; and as the day cleared up we could see at every house a tenter and on almost every tenter a piece of cloth, kersey or shaloon which are the three articles of the country's labour. . . .

'Such it seems has been the bounty of Nature to this country, that two things essential to life, and more particularly to the business followed here, are found in it and in such a situation as is not to be met with in any part of England if in the world beside; I mean, coal and running water on the tops of the highest hills. This place then seems to have been designed by providence for the very purposes to which it is now allotted for carrying on a manufacture which can nowhere be so easily supplied with the conveniences necessary for it. . . .

'There is nothing extraordinary in the town itself; but the multitude of the people who resort to it on a market day as well to sell their manufactures as to buy provisions, is prodigious; in this respect no places equal it in the North part of England, except Leeds and Wakefield.'

The cloth market at Leeds filled him with admiration:

'But the cloth market is to be admired as a prodigy of its kind and perhaps not to be equalled in the world. The market for serges at Exeter is indeed a wonderful thing and the money returned very great; but it is there only once a week whereas here it is every Tuesday and Saturday.'

He describes how tressles are set out in rows on either side of the street, on which the clothiers display their cloth: the market opens, at six in the summer and seven in the winter, at the ringing of the market bell at the old chapel by the bridge. In little more than an hour the business is done: at half-past eight the market bell rings again, upon which the buyers disappear and any remaining cloth is carried back into the inn, and by nine o'clock the street is left at liberty.

'Thus you will see £10,000 or £20,000 worth of cloth and sometimes much more bought and sold in little more than an hour, the laws of the market being the most strictly observed that I ever saw in any market in England.'

And he gives us the reason for the greatness of the market: the great quantities exported to the American Colonies, to Russia, Prussia, and Holland; and also the facilities for transport afforded

by the improvement in the Aire and Calder waterways which enabled the goods to be carried to Hull for export.

All he has to say of Bradford is that ' it has a market ; but is of no other note than having given birth to Dr. Sharp, the good Archbishop of York '.

From Defoe's time onwards the Yorkshire trade shows a steady growth, both in woollens and worsteds. In 1727 the number of broadcloths made in Yorkshire was 28,990. By 1750 it was 60,477. In 1770 it was 93,075. Twenty years later it was 172,588, while by 1800 it had risen to over 285,000. There was a like increase in the output of narrow cloths, which between 1770 and 1800 rose from eighty-five thousand to near one hundred and seventy thousand, while by 1772 the West Riding was drawing level with East Anglia in the production of worsteds. Up to 1690 the tide of prosperity had been rising in the eastern home of the industry : from 1690 to some date between 1725 and 1740 there was a period of slack water : by the middle of the eighteenth century the tide was beginning to set in favour of Yorkshire.

Long after the woollen industry had died out in Bristol and Gloucester it continued to survive as a village industry, in the district bounded by Painswick, Bisley, Dursley, and Wotton. Cobbett in his *Rural Rides* in 1821 when he looked over the vale from ' Burlip Hill ' spoke of the fine farms and fine pastures, all enclosed and divided by hedges : ' the girls not in rags, as in Wiltshire ' and the ox-teams used for ploughing ' some of the finest I ever saw '. Chalford on the Frome, whose waters were considered specially suited to the manufacture of scarlet dye, still points with pride to Rank Hill, where one can see the terraces on which the cloth for the troops of the East India Company used to be stretched out to dry. But about 1830 the decline set in, and with the decline of the industry the population decreased. The long tradition of the hand-loom industry made opposition to machinery stronger : in 1851 (when Gloucestershire broadcloth won high commendation at the Great Exhibition) practically no machinery was used in Gloucestershire except in

Stroud; and Stroud alone increased in population after 1830. In the other historic seat of the industry tradition was equally strong in its opposition to machinery. The Report of the Handloom Weavers in 1840 found the industry in Norwich still almost entirely domestic.

CHAPTER VI

THE COMING OF NEW CONDITIONS

One of the causes of the Domestic System lasting so long was the backward state of communication and transport. Village communities have subsisted age after age in the changeless East for this reason. In England from the time of the departure of the Romans in 436 to about a hundred years ago roads were incredibly bad. The Romans had taken the large view that the building and upkeep of proper means of communication was the duty of the Central Government. They established great roads throughout the kingdom, and planned them so well that the modern railways have followed their general directions. They even pointed the way to the later canal builders, by making the Fosse Dyke, a canal which connected the Trent with the Witham.

But after Roman times roads fell into decay until in the Middle Ages the monasteries took up the work of repairing roads as a religious duty, regarding it as equally meritorious to help the unfortunate traveller on his way as it was to visit the poor or the sick. Indulgences were granted to those who contributed to the funds for road and bridge repairs.[1] Men left money for the mending of the highways. Religious Gilds were formed in the reign of Richard II for the same purpose.

All that the monasteries could do was little enough, and with

[1] From Anglo-Saxon times the *Trinoda necessitas*, incumbent on all freemen, had nominally provided for the upkeep of bridges, along with military service and the maintenance of fortifications. But cf. Magna Carta § 23, which protected market towns from being forced to make bridges unless in accordance with ancient custom.

their dissolution the condition of the roads became worse. Wheeled vehicles were coming into use—very slowly, though Deloney, in the latter half of the sixteenth century, wrote of 'a great number of waines loaden with cloath, coming to London', —and action by the State became necessary. A Statute of Philip and Mary, passed in 1555, directed that constables and churchwardens in every parish should in Easter week each year call together 'a number of the parochians' and choose two honest persons to act for the next twelve months as surveyors for mending parish highways leading to market towns.

Meanwhile the difficulties of transport were enormous. Wool was usually, though not always, carried on pack-horses, and houses can still be seen with doors in the upper story—where the combing was usually done—for the convenient taking-in of wool-packs. Traders made up companies in order to secure for themselves protection against robbers. Thomas Deloney, in his tale *The Pleasant Historie of Thomas of Reading*, says: 'Now you shall understand these gallant clothiers, by reason of their dwelling places, separated themselves into three several companies: Gray of Gloucester, William of Worcester, and Thomas of Reading, because their journey to London was all one way, they conversed commonly together. And Dove of Exeter, Sutton of Salisbury, and Simon of Southampton, they in like sort kept company the one with the other, meeting ever all together at Basingstoke; and the three northern clothiers did the like, who commonly did not meet till they came to Bosome Inne in London.' The names of these gallant clothiers may be fictitious, but the desire they evinced for one another's company and protection is historical enough.

Fresh bands of robbers and highwaymen appeared after every war. The Civil Wars produced many, for the cavalry soldier of those days owned his horse, his sword, and his pistols. More is heard of highway robbery after Charles II's reign, because the publication of newspapers caused it to be far better known: from his time onwards it can be traced in the *Gazette*. The number of highway robberies appears to have decreased under

James II, but he added 20,000 men to the army, which may account for it. The clothiers and graziers, who had to carry large sums of money when attending markets, were the special prey of the northern highwaymen.

Traders were, however, ready to risk disturbance by highwaymen on the road just as they were ready to face pirates on the sea. What they were often unable to cope with was the condition of the roads in winter. In villages and hamlets winter was prepared for as one would prepare for a siege. Fairs were

PACK-HORSES

held not later than the autumn, while the roads were still passable. When all services in kind were being commuted, the last service the lord was willing to dispense with was that of carting, because of its exceeding difficulty. Though this state of things was of great convenience to smugglers and highwaymen, it benefited no one else. Pepys and his wife lost the road in 1668 between Newbury and Reading, and again near Salisbury, and were in danger of having to spend the night on the plain. Defoe, however, travelling over the same road fifty years later, records 'a certain never-failing assistance for the direction of strangers, the number of shepherds keeping their vast flocks of sheep, whom, with very little pains, a traveller may always speak with'. In

1712 Thoresby the Antiquary, who was in the habit of travelling between Leeds and London, lost his way entirely on the great North Road between Doncaster and York. Many places, especially in hilly districts, were entirely inaccessible except to the pack-horse.[1] There was a 'Pack-horse Inn' in every town, and in many villages: the presence of a 'Wool-pack Inn' in Eskdale gives an idea of the recesses to which the pack-horse

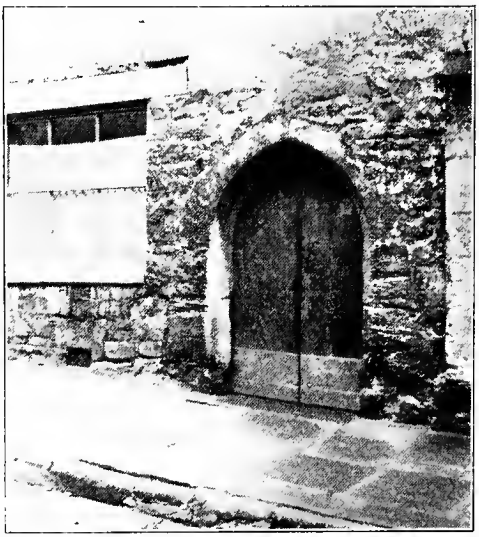
A COACH IN THE SEVENTEENTH CENTURY

would penetrate. The stage coach has been immortalized by De Quincey and Dickens, but the romance of these gallant teams of pack-horses, plodding their way winter and summer, in dark and in daylight, up hill and down dale, over narrow, unrailed bridges, &c, through fords and quagmires, tenaciously following the bell of their leader, has yet to be written.[2]

[1] Defoe 'quitted Halifax not without some astonishment at its situation, it being so surrounded with hills, that (except at a West Entrance) the approach to it is exceeding troublesome, and indeed for carriages hardly practicable'

[2] In many parts of the country are still to be seen the raised causeways

Wheeled wagons came more into use as the seventeenth century went by, and the effect on the roads was disastrous. The line taken, however, was not to adapt the roads to the new traffic, but to adapt as far as possible the traffic to the roads. Restrictions were made as to the weight that might be carried, and for the same purpose as to the number of horses that might



FOURTEENTH-CENTURY DOORWAY (temp. Rich. II), Bisley Street, Painswick. This type of door was made wide to enable the wool-stapler to take his pack-horse through—often to its stall in the cellar. There are old marks of a ring to halter the horse low down on the right.

be employed in drawing a wagon, and regulations were made to enforce the use of wheels of a certain breadth. It was felt that if only wheels were broad enough they would not form ruts but act as rollers, and actually improve the roads on which they passed. Wheel-rims or ' fellies ' had as a rule to be 9 inches

along which the teams used to travel, and when two teams met many a tussle took place between the leaders before either would give way and allow passage on the causeway to the other.

wide, and some were made of 13, 16, and even 18 inches. In George III's reign freedom from tolls was allowed to wagons having ' fellies ' of a breadth of 16 inches and upwards. Until roads were made firmly such a policy was necessary. Defoe sufficiently explains the reason in his description of ' those terrible clays ' which covered the midland part of England for a breadth of fifty miles, so that it was impossible to go north from London to any part of England without passing through them. This stiff clay or marly earth was, he says, ' perfectly frightful to travellers '.

Between 1715 and 1745 the danger of Jacobite invasion and the need for mobilizing troops to meet it provided the country with 800 miles of good road, and throughout the century improvement was steadily effected by means of the Turnpike system. The principle of this system was that the upkeep of roads was to be charged to those who used them instead of to the parishes through which they passed. The first Turnpike Act was passed in 1663. In 1725 Defoe was writing hopefully of the system. The growing number of coaches caused it to be more widely adopted. In 1706 coaches began to run three times a week between London and York. In 1760 Manchester got a three-days' coach to London. In 1774 Burke travelled from London to Bristol in twenty-four hours, though it was considered a very exceptional journey. Ten years later mails began to be taken by coach. This had a considerable influence on road improvement, as delay in the arrival of mails attracted general attention. As the century closed two Scotchmen, Telford and MacAdam, by insisting on good drainage produced satisfactory roads. Meanwhile the railway era was dawning, and the Post Office insisted upon the speed of the mail-coach being increased from eight miles an hour to ten. The increased speed caused the death of two horses in every three journeys of 200 miles. The new regulations were repugnant to all lovers of horses and opposed to humanitarian considerations.

Thus, although roads were improving all through the eighteenth century through the operation of the Turnpike system, they

were not satisfactory until railways were almost ready to take over much of their traffic. The cost of road-transport was in proportion to its difficulty. From London to Birmingham the cost was £7 a ton ; from London to Exeter £12 a ton. Coaches and carts were drawn by six, eight, or ten horses, not for magnificence but from necessity. Adam Smith in his *Wealth of Nations* declares that a broad-wheeled wagon drawn by eight horses 'in about six weeks' time carries and brings back between London and Edinburgh near four ton weight of goods '. On the other hand, as the roads improved the cost went down : from Exeter, Bristol, Gloucester, and other towns in the west, from which the carriage of wool to London was very great, the cost of transit had decreased in 1745 from 12*s.* to 8*s.* per hundredweight.

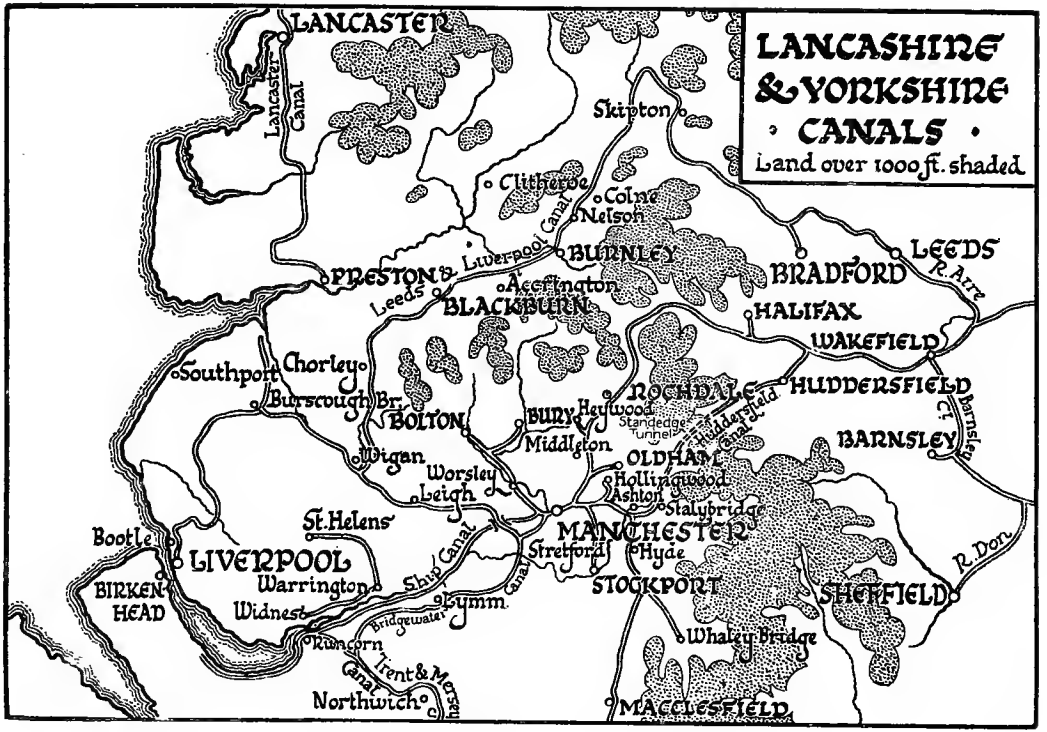
From Roman times communication by water was at least as important as communication by road. It may be affirmed that the majority of the older towns owed their existence to their situation on navigable rivers.[1] The prosperity of that great early seat of the wool trade, the western counties, depended upon the Severn, which is navigable for 155 miles of its course, and was, according to the ' chronicler ' Harrison, as early as Elizabeth's time ' nothing at all inferior ' to the Thames in ' trade of merchandise ' and ' plentie of cariage '. York was the centre of the Yorkshire woollen industry for the same reason. The importance of Norwich was due to its position on the Yare. The rapid expansion of commerce and industry in the seventeenth century, which followed upon the plantation of colonies, caused attention to be paid to river improvement, and the canal era, which began in 1760, was preceded by a whole century of river improvement. In 1699 an Act was passed, owing to petitions from the clothiers of Leeds and Wakefield, for rendering navigable the Aire and the Calder. The clothiers of Rochdale meanwhile were complainng that they were forty miles from any water carriage, and the clothiers of Halifax similarly that they had no water carriage within thirty miles.

[1] The curious shape of many parishes is doubtless due to desire to have access to a navigable stream without going outside the parish boundaries.

Needs such as these, and the experience already gained in river improvement, led naturally to the construction of canals. In this work the great pioneer was James Brindley, agent to the Duke of Bridgewater. The scheme for his canal from Worsley to Manchester was sanctioned by Parliament in the 'year of victories' 1759. Two years later it was opened, and at once proved a triumphant success. The Duke of Bridgewater then projected the more ambitious scheme of a canal between Manchester and Liverpool. Great opposition had to be faced in Parliament, and the Duke's fortune was taxed to the uttermost. As Brindley put it with his inimitable spelling, 'The Toores mad had agane ye Duk.' But the canal was completed in 1767, though the flight of locks at Runcorn, which brought it down to the level of the Mersey, was not finished till six years later.

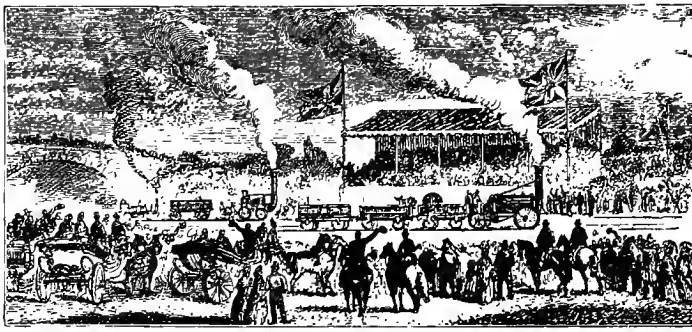
Before this canal was finished Brindley was engaged upon one, known as the Grand Trunk Canal, to connect the Mersey with the Severn and the Trent, to link up Liverpool, Hull, and Bristol by inland water communication. Wedgwood, the great potter, helped to promote the scheme, which necessitated in addition to locks a tunnel a mile and two-thirds in length. In 1769 the Leeds and Liverpool canal was sanctioned by Parliament. To build this canal the hills at Foulridge, near Colne with its wool-market, had to be pierced by a tunnel nearly a mile long, and aqueducts had to be built to carry it over the Aire and over the Shipley valley. Keighley, Bradford, and Leeds, no less than Wigan, Blackburn, and Nelson, owe much of their expansion to this canal. The word navvy (navigator) and the frequency of the name 'Navigator's Arms' for country inns testify to the districts where river improvement and canal building were taking place during these decades.

Canals had advantages over rivers for purposes of transport in that they did not suffer from floods, and very little from droughts, and not at all from tides. On the other hand, the British canals did suffer from the fact that they were planned locally instead of on a central and uniform scheme. In one locality the barges were long and slim, in another short and


LANCASHINE & YORKSHINE CANALS
Land over 1000 ft. shaded.
LANCASTER
Lancaster Canal
Skipton
Clitheroe
Colne
Nelson
Liverpool Canal
PRESTON
BURNLEY
LEEDS
R. Aire
BRADFORD
Accrington
Leeds & Liverpool Canal
BLACKBURN
HALIFAX
WAKEFIELD
Southport
Chorley
Burscough Br.
ROCHDALE
HUDDERSFIELD
Huddersfield Canal
Standedge Tunnel
Barnsley Canal
BOLTON
BURY
Heywood
Middleton
BARNSLEY
Wigan
OLDHAM
Worsley
Hollinwood
Ashton
Leigh
Stalybridge
St. Helens
MANCHESTER
Bootle
LIVERPOOL
Stretford
Hyde
R. Don
Ship Canal
Warrington
STOCKPORT
SHEFFIELD
BIRKEN HEAD
Widnes
Lymm
Bridgewater Canal
Whaley Bridge
Runcorn
Trent & Mersey Canal
Northwich
MACCLESFIELD

broad. Locks were, of course, suited in shape to the barges. Consequently it often happened that barges from one canal could not be navigated on another canal, and transhipping of goods was necessary, with extra handling and expense. Nevertheless the cost of transport by canal was about one-fourth of the cost of transport by pack-horse or wagon.

Railways, in the sense of a 'way' on which rails were used, date back to the seventeenth century, Such railways were built mainly in connexion with collieries, and the 'rails' were



LOCOMOTIVE COMPETITION AT RAINHILL IN 1829
The Rocket in front

made of wood or stone. The wagons or trucks were horse-drawn. A horse railway was constructed near Sheffield in 1776 with iron rails having an inner flange about three inches high to keep the wagons on the rail. The next stage was the use of a stationary engine to draw wagons up ascents which were beyond the power of the horse, and to regulate the pace of the descent. With the advent of the locomotive steam-engine, first made a working success by George Stephenson, and the opening in 1825 of a public railway between Stockton and Darlington—the first public railway in the world—the success of the railway movement became assured and rapid, in spite of a lack of sympathy that amounted to distrust on the part of the State. In 1838 the

London to Birmingham Railway was opened with its terminus at Euston. In the next two years 320 miles of railway were constructed, including the railway from Leeds to Manchester, and from 1840 to 1846 the country went railway mad and hundreds of Acts were passed by Parliament authorizing new lines. Queen Victoria made her first railway journey in 1842.

Steam was at the same time being applied to ships. As early as 1803 a little steam tug was in use on the Clyde. By 1820 steamboats were running between Dublin and Holyhead, and five years later there was a steamship service between Suez and Bombay. Thus ocean steam transport was ready to carry the raw wool from Australia to the rapidly developing spinning and weaving factories of Yorkshire, and to bring in the abounding products of virgin soils across the ocean to help to feed the growing population at home.

The coming of railways is mentioned in this chapter rather for the sake of completing the sketch of the changes that were made in means of transport than as being one of the factors that precipitated the Industrial Revolution. The improvement of the roads and rivers, and the building of canals must be reckoned among the new conditions that helped to break down the Domestic System, but the railway era only dawned as the Industrial Revolution, in the accepted sense of the term, was closing. It was not the railways, but the canals, which supplied the means of transport that enabled the steam-engine to effect a revolution in industrial methods.

Side by side with the development of means of communication and of methods of manufacture, there was proceeding a revolution in Agriculture. Bakewell of Leicester and Coke of Holkham in Norfolk had shown how to improve the breeds of sheep. Townshend had shown the value of root crops in keeping cattle alive through the winter. Reformers like Arthur Young showed how Science could be applied to the soil, when the long stress of war made better tillage of the soil profitable. All this led to a new enclosure movement. The small tenant, who eked out a living partly by his land and partly by his loom, had

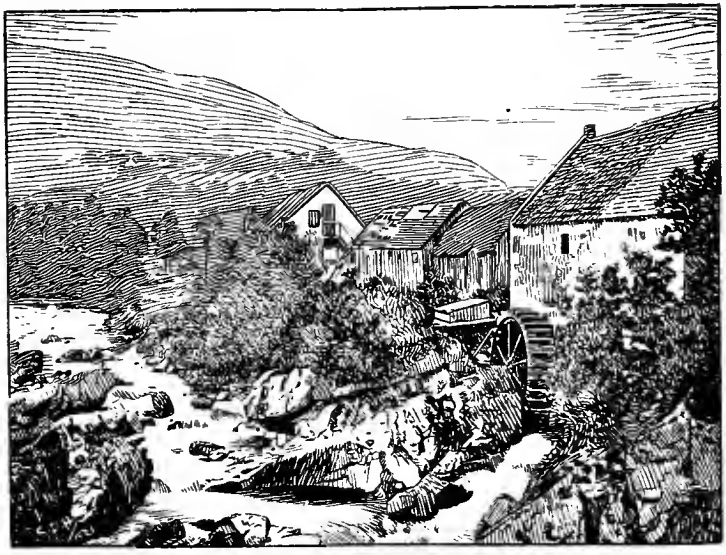
neither the capital nor the education to adopt the new methods. These methods required not only a new kind of farm but a new kind of farmer. The urgent need for food quickened the zeal of reformers and the business instincts of landlords. Between 1700 and 1750 more than a hundred Enclosure Acts were passed. In the next sixty years the number reached nearly three thousand. In village after village the church registers show that this is the time when the old yeoman families, who had farmed their own lands for generations, disappeared, and the new names begin. The land passed into fewer and fewer hands. Thousands of cottagers were rendered penniless and had no course open but to tramp away to the new towns that were springing up in the textile centres in the north of England, thus providing the new industries with cheap labour.[1]

The break-up of the old land system set adrift a supply of cheap labour just at the time when new means of transport made a national instead of a local economy possible. As all parts of the country were linked up, the natural products of any one part could be distributed as required to other parts. This was especially important in the case of coal. For side by side with the development of new means of transport came a long series of inventions. It is difficult to account for the fact that they came at this moment and not at any other. But come they did, and they required motive power to drive their new machinery.[2]

[1] The extent to which the population shifted from the country to the towns may be judged from the following figures. In 1688 Gregory King, a statistician, estimated that out of the total population of 5½ millions only 1¼ millions dwelt in towns. In 1770 Arthur Young, writer on agriculture, estimated that the ratio of town-dwellers to dwellers in the country was as 1 to 1. In 1821 the ratio was 2 to 1.

[2] The 'gaping market' which the victories of the eighteenth century offered to British manufactures no doubt acted as a stimulus. Gibraltar gave access to the Mediterranean; the Methuen Treaty opened up Brazil; the Treaty of Utrecht partly opened the Spanish market of Central and South America; there was the Indian market, and the markets of North America, and access to the German market through Hanover and Bremen. England had never had such a market, and all through the century there was no competitor. To meet its needs she had, until the inventions came, only primitive and limited means of production. If the problem of the

At first water power was the power used—as many old mills in now-deserted valleys, and old names, such as 'hammer-pond' in parts of Sussex and 'Carding-mill Valley' at Church Stretton, testify. It was the excellence of its water supply rather than the abundance of its coal seams that first made the north of England the centre of the growing industries; the migration to the north



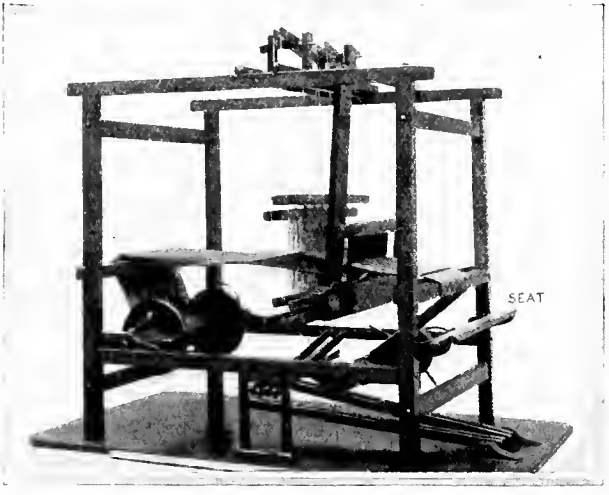
A WATER-MILL

had already begun when the invention of Newcomen's pump—with its rotatory movement of the water that was capable of unlimited development since water could be passed through several pumps, gaining in velocity each time—made deep coal mining possible. The bulk of England's coal lies in the north, and Newcomen's invention made a complete shifting of the centre of gravity of the country's population a certainty.

The new inventions which revolutionized the textile industry

nineteenth century was one of distribution the problem of the eighteenth was certainly one of production.

were in the first place applied to the manufacture of cottons, then a comparatively new trade. It was only later that they were gradually adapted to woollens and worsteds. This fact had an important bearing on the position of the woollen worker. The manufacture of cotton, which involved the use of the new machinery, was held to be a more skilled trade ; better wages were paid and a higher type of worker secured than was the case in the woollen industry. In both branches, however, this



HAND-LOOM WITH HAND-THROWN SHUTTLE

important principle held good, that the weaver used more yarn than the spinner could produce ; it took roughly ten spinners to keep one weaver fully supplied. In the early eighteenth century cotton goods were rapidly increasing in popularity, and the supply of yarn began not to be equal to the demand. In 1738 John Kay of Bury invented the flying shuttle, a shuttle that was sent backwards and forwards by means of hammers worked by strings ; this meant that weaving became still more rapid, and also that the width of the cloth woven was no longer limited to the breadth of a man's span, as it had been in the old

days when he had cast the shuttle from one hand to the other across the loom. The need for some invention which would enable the spinner to keep pace with the weaver, became more urgent still, and in 1764 John Hargreaves of Blackburn produced the spinning jenny. In this machine, by means of a belt attached to the wheel, 8 (soon afterwards 100) spindles could be worked simultaneously. Five years later Richard Arkwright improved on Hargreaves's invention; by means of various rollers revolving at different rates he produced threads of various fineness; and his machine, unlike the others, was worked by water power and not by hand.

JOHN KAY
Inventor of the flying shuttle

Thus the spinner caught up to the weaver; the supply of yarn now exceeded the demand, and there was even a surplus of yarn left over for export. The weaver's turn came next; the Rev. Edmund Cartwright in 1785 invented a weaving machine or power-loom which was soon adapted for steam power; and in 1790 he also invented a wool combing machine which not only saved an enormous amount of time but had the additional advantage of mixing the wool equally and producing the slivers of uniform length. This machine was later improved by Lister, as the power-loom was by Horrocks. After this other machinery followed fast; in 1785 Bell invented cylinder printing, instead of the old method of stamping on the design with small wooden blocks by hand; and there were machines for dressing and shearing the woven cloth. By the end of the century the general application of steam to all these processes had begun.

The application of these inventions to the woollen industry was greeted with mixed feelings. The clothiers of the eastern counties—round Colchester, for instance—strenuously resisted

the introduction of the flying shuttle and the spinning-jenny. Perhaps it was because wages were so low there—4*d*. a day compared with 1*s*. 3*d*. to 1*s*. 4*d*. round Halifax—that the old methods seemed to pay better. But in the north, where a vigorous attempt was being made to capture the worsted trade from the eastern counties, the machines were generally welcomed by the clothiers. Benjamin Gott, of Leeds, about 1800 was one of the foremost. In 1793 Arthur Young 'viewed with great

HARGREAVES'S SPINNING JENNY, patented in 1764

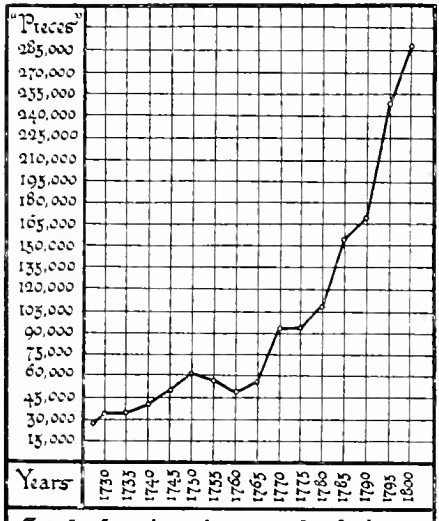
pleasure the machines for unclothing and puffing out wool; also for spinning and various other operations'. This view was not always shared by the local people. When in the same year Mr. Buckley had an idea of starting a factory run by steam power in Bradford, at the bottom of Manchester Road, all the respectable inhabitants were against it, and joined in sending him due warning, 'To Mr. John Buckley, cotton manufacturer, in Bradford in the West Riding of the county of York; take notice, that if either you or any person in connexion with you shall presume to erect or build any steam engine for the manufacture

of cotton or wool in a certain field in Horton near Bradford aforesaid, called or known by the name of Brick Kiln Field, we whose names are hereunto subscribed shall, if the same be found a nuisance, seek such redress as the law shall give'. Mr. Buckley accepted the warning; he went to Todmorden, where, he felt, the skies were secure against pollution, and prospered exceedingly. Though the workmen at first regarded these machines with some hostility, the abundant work and good wages that the developing trade in the West Riding provided soon reconciled them. Sir Walter Calverley built fulling mills on the Aire to attract cloth-workers to his estates. In spite of the spinning machines—first introduced into Bradford in 1780—there was still not enough yarn, and the weaver still had to depend largely for his supplies on the domestic spinning wheels of Craven and the northern valleys of Yorkshire.

But throughout the period it is very difficult to draw any generalization. The woollen industry, as we have seen, was a very localized one; even in the three chief centres, the south-west, East Anglia, and the West Riding, the manufacture was scattered over a wide area. Conditions differed in each of these. There was a form of capitalism round Norfolk long before it ever existed in Yorkshire, where special circumstances enabled the small master to hold his own. In the south-west the industry was in the hands of the 'Gentleman Clothier' But neither in Norfolk nor in the south-west was the existence of capitalism followed by an extensive introduction of machinery. Certain types of manufacture were carried on in one district and not in another; questions of export and import also arose. Hence certain types of machinery might be introduced into one district fifty years before they were introduced into another. In some places, expanding trade might for the moment absorb the workers whom otherwise the new machines would have turned out of employment—thus foreshadowing what might happen when ultimately the era of machinery had established itself. In cotton manufacture on the other hand, where the trade was more compact, the effects are for that reason more obvious and seem more

striking. Therefore to appreciate fully what took place in the woollen industry it would be well to supplement what is said here by a more detailed study of what took place in some one district.

The introduction of machinery in the south-west started in 1776, when spinning jennies were set up at Shepton Malet. It has been estimated that a piece of work which under the old hand system would have taken one woman, with two or three children to help her, 612 hours, could be done under the new, by two 'mules' worked by one man and one child, in 12 hours. The effect on the demand for labour is obvious; riots in consequence broke out everywhere and Parliament was petitioned—unsuccessfully—to forbid the machinery. This hit the workers in the towns very hard; the new machines were worked not by steam but by water power, and therefore the industry moved out of the towns to those places where water power was available. Thus amid the general distress some favourably situated villages benefited.



Graph showing the growth of the manufacture of Broadcloths in Yorkshire from 1727 to 1800.

In Yorkshire the spinning jenny started in the woollen industry in 1780, and owing to the growth in trade there was at first little distress. In the worsted manufacture the jenny was little used. Here the machine which drove out the old domestic

spinning-wheel was Arkwright's water-frame, and the first worsted mill was set up at Dolphin Holme in Lancashire in 1784. In earlier days Norwich had sent wool into Yorkshire to be spun into yarn; but, with the development of the worsted trade in the north, Yorkshire could not spin enough yarn for itself, and this shortage of labour led first to Yorkshire sending to Norwich for its yarn, then to the setting up of worsted mills. This reversed the process; with the beginning of the nineteenth century Yorkshire was sending machine-spun yarn into Norfolk. Here no machinery was set up—though some attempts were made to start it. Consequently the cheap machine-spun yarn from Yorkshire swamped the market; the demand for the hand-spun yarn decreased and the rate of wages decreased also. Hand-spun yarn was only used for the finer stuffs, since the machine-spun yarn was rougher. Domestic spinning rapidly died out, and by 1830 it had practically ceased to exist. The displaced labour had to look after itself as best it might.

With the increased rapidity of production, the question of the supply of raw wool became a pressing one. Under the first two Stuarts all export of wool had been forbidden in spite of the opposition of the landed interest; and after the Restoration in 1660 the Government had continued the prohibition with a view to increasing the manufacture of woollen goods at home. From 1660 to 1825 smuggling of wool out of the country —'owling', as it was still called—to feed French and Flemish looms went merrily on. The coasts of Yorkshire, Lincolnshire, Kent, and Sussex were some of the best-known hunting grounds. Romney Marsh was especially famous. The Governments of the day spent thousands of pounds in trying to check it, but with little success. Most of the landowners who grew sheep would have preferred that they should have been allowed to export to foreign markets, on payment of an export duty; this, they said, would encourage men to grow wool; as it was, the price was dropping and less and less was being produced. This shortage in the supply certainly sent up the price—after 1785 it was rising; by 1795 Norfolk fleeces were

19*s.* 10*d.* per pack, and by 1809 they were 34*s.* For the Napoleonic war had interrupted the supply from Germany and from Spain, and made England more dependent than ever on her own resources; these were growing less with the increase of enclosures and the ploughing up of the land for tillage due to the revolution that was taking place in Agriculture, and to the demands of the growing population. Australian wool was hardly yet ready to supply the deficiency. The first consignment reached England in 1808, but it was considered to be suitable only for woollen goods. The use of Australian wool in the worsted trade was only beginning in the thirties.

The shortage of wool had another even more important effect: it led to lack of employment, and wages at 4*d.* a day instead of the 7*d.* or 8*d.* they had been half a century before. But here the Yorkshire manufacturer saw his chance. The introduction of the flying shuttle and the spinning jenny enabled good weavers to earn more money; and also made it possible to get the final victory in the struggle between the eastern counties and Yorkshire for the manufacture of worsteds, a branch of the wool industry in which for so long the eastern counties had practically had a monopoly. Halifax—at that time the centre of the West Riding Industry—was paying four times the wage that the eastern counties paid, and the migration of the trade northwards, which had begun in the first part of the eighteenth century, had gone on so rapidly that by the end of the century the eastern counties had ceased to be a serious competitor. In 1772 the stuffs made in the West Riding were equal in value to those made in Norfolk and the districts round about, and Norfolk was still 'full of manufacture'. But in 1838, while there were 346 mills in the West Riding, in Norwich there were but three, employing less than 400 persons.

The reason why this worsted trade came to the north throws an interesting light on the links that join together mediaeval and modern trade. The old woollen trade of Yorkshire had largely been in the hands of two great trading companies, the Merchant Adventurers and the Eastlanders, who controlled the

export of cloth. But by the eighteenth century these companies were practically dead. The way was cleared for the new trade, for which in the early stages the existing organization was very suitable ; an irregular supply of yarn did not matter to a clothier who was having a hard fight to create a demand, while under that same domestic system bad work could always be refused. The worsted trade after a hard struggle made good its footing, as the Piece Hall at Bradford showed—an ' elegant and commodious ' building erected in 1773 ; but it was not till 1787 that a worsted mill was built at Addingham, near Ilkley ; and that was the second earliest in the kingdom.

Though the naturalizing of this Norfolk industry in Yorkshire had not been due to machinery, machinery when once established played a great part. The domestic system continued in the woollen industry ; it rapidly died out in the worsted. The committee reporting to Parliament on hand-loom weavers in 1839 stated that ' the power-loom was unknown to the cloth manufacturer till 1832 ' and even in 1835 there were only a few looms, and those experimental, in the woollen manufacture round Leeds. But ' it is in the worsted trade of the West Riding that the adoption of the power-loom has become general. In the cloth trade it has as yet made little progress '. In that statement there lies the reconciling of the two apparently conflicting opinions about the introduction of machinery : in the worsted, which was a new trade in Yorkshire, it was introduced, and at first picked men got good wages : the old woollen trade went on in the old way. In 1814 a good worsted weaver was getting 34*s.* 6*d.* a week : so much yarn was being spun that a weaver could make his own terms. But wages such as these soon increased the supply of weavers ; and children were taught to weave, in cotton and worsted. So wages dropped, till in 1838 a worsted weaver was getting 12*s.* 6*d.* But cloth weaving was work too heavy for children—that was a man's job : so the wages of the cloth weaver kept a good deal higher.

One of the reasons why machinery steadily made its way in the north, while it failed in the two older centres, the east and

the south-west, was that in both these latter centres the workers were organized far earlier, and were therefore more successful in resisting disturbance to traditional methods. The woollen weavers in the south-west of England had been associated in some form of organization since quite early times. The industry was run on capitalist lines, and feelings of hostility had long existed between masters and men. 'The Clothiers' Delight', a seventeenth-century ballad, shows what some of the weavers were thinking (the clothiers are supposed to be speaking):

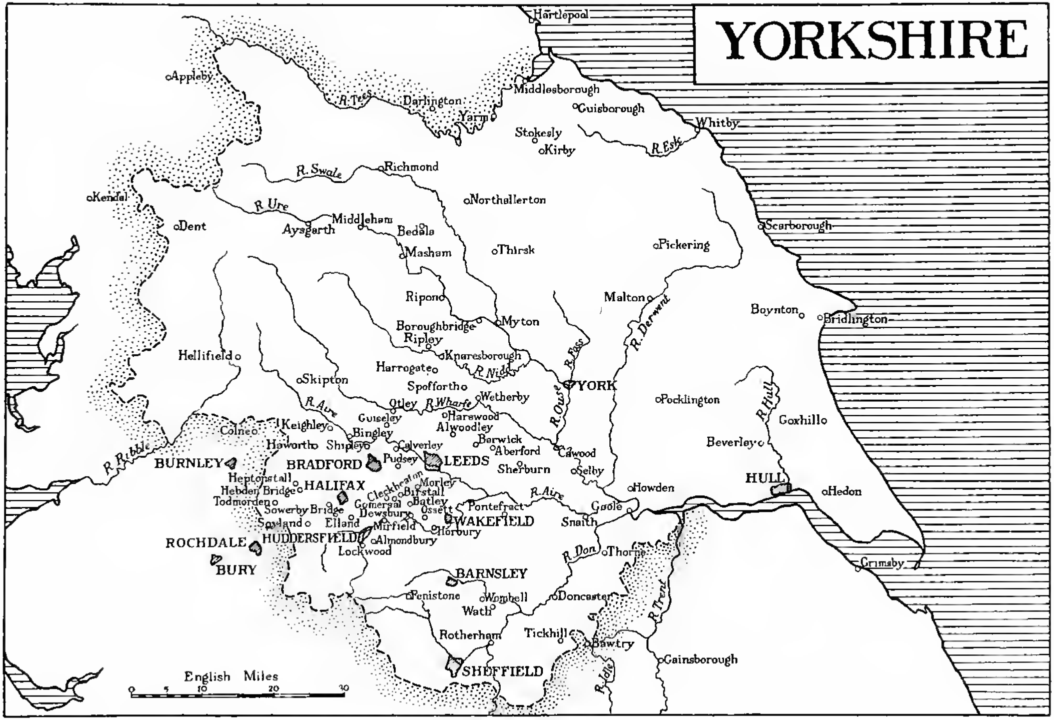
> We'll make the poor weavers work at a low rate;
> We'll find fault, where there's no fault, and so we will bate;
> If trading grows dead, we will presently show it,
> But if it grows good, they never shall know it.

Parliament tried to stop the men from combining and the masters from paying in 'truck' instead of in money, but with little success. In Norwich also there must have been a strong organization, since the workers were powerful enough to compel the masters to withdraw a proposed reduction in wages. Machinery was hardly introduced at all: 'for any one at this period to attempt to set up machinery in Norwich was to venture his life.'

CHAPTER VII

THE INDUSTRIAL REVOLUTION

In the narrower sense the words 'Industrial Revolution' are used to imply the invention of machinery and the application of steam to that machinery. In the broader sense the words imply much more: they include the vast expansion of trade that the use of steam-driven machinery has brought about; the growth of capitalism that has made an extensive use of machinery possible; the great increase in population that has resulted; the conflict that has arisen between Capital and Labour; the passing away of the old restrictions on commerce and industry and the gradual imposing of new ones on



YORKSHIRE
Hartlepool
Middlesborough
Guisborough
Whitby
R. Esk
Stokesly
Kirby
Appleby
R. Tees
Darlington
Yarm
Richmond
R. Swale
Northallerton
Kendal
R. Ure
Middleham
Aysgarth
Bedale
Masham
Dent
Scarborough
Pickering
Thirsk
Ripon
Malton
R. Derwent
Boynton
Bridlington
Boroughbridge
Myton
Ripley
Knaresborough
R. Nidd
Harrogate
R. Foss
Hellifield
Skipton
Spofforth
YORK
Pocklington
R. Hull
Goxhill
R. Aire
Otley
R. Wharfe
Wetherby
R. Ouse
Guiseley
Harewood
Alwoodley
Colne
Keighley
Bingley
Haworth
Shipley
Calverley
Berwick
Aberford
Cawood
Beverley
R. Ribble
BURNLEY
BRADFORD
Pudsey
LEEDS
Sherburn
Selby
HULL
Heptonstall
HALIFAX
Cleckheaton
Morley
Birstall
Hebden Bridge
Todmorden
Gomersal
Batley
Sowerby Bridge
Dewsbury
Ossett
Pontefract
R. Aire
Goole
Howden
Hedon
Soyland
Elland
Mirfield
WAKEFIELD
Snaith
ROCHDALE
HUDDERSFIELD
Almondbury
Horbury
BURY
Lockwood
R. Don
Thorne
Grimsby
BARNSLEY
Penistone
Wombell
Wath
Doncaster
R. Trent
Rotherham
Tickhill
Bawtry
Gainsborough
SHEFFIELD
R. Idle
English Miles
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30

conditions of working—in fact they imply all those vast changes that have produced the industrial and economic conditions under which we are living to-day.

It was the rapidity with which change succeeded change, invention followed upon invention, in the eighty years between 1760 and 1840 that has caused that period to be known as the Industrial Revolution. In the woollen industry, with its deep-rooted traditions, the adoption of machinery came at first comparatively slowly, and the full force of the change was not felt till the nineteenth century had begun. In 1800 there were not more than twenty factories in Yorkshire. Combing was done by hand till after 1840. The power-loom was not introduced into Bradford till 1825, and its use could not be said to have been general till the middle of the century.

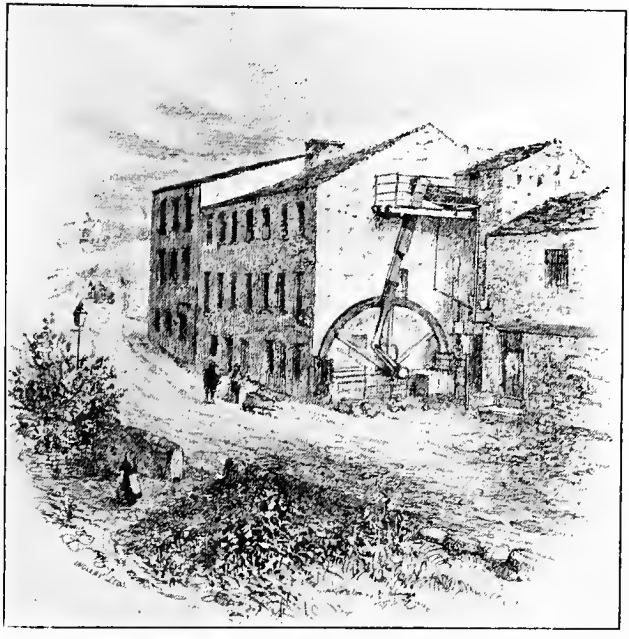
Under the domestic system the majority of workers had been piece-workers, dependent upon a master, but they had owned, or at least hired, their implements, objectionable as the practice often was. With the advent of the new machinery this was not possible. As the new system replaced the old it came to pass that the average labourer worked at a machine owned by his employer in a building owned by his employer. He had only his labour to sell. Labour is not a commodity, nor will it keep. If one does not sell Monday's working-power on Monday it is lost for ever. So under the factory system the wage-earner at first fell into a weaker position than he had been in under the domestic system. Moreover he was more uncomfortable. He could no longer work to his own time. Machines cost a great deal of money and had to be kept running. If they stood idle it meant a loss of money. Fixed hours, to suit the machines, had to be kept. Petty details had to be observed. Hours were very long, often fourteen and even sixteen a day. Discipline was nearly as rigid as that of an army on a campaign. The rigid punctuality and the early hours reacted hardly on families that rarely owned a clock. Dwellings were not arranged for. Town planning, even decent drainage, were scarcely thought of. Wages were low, and there was no longer the opportunity of

eking out the earnings by a little work on the land. In all great and sudden changes, such as that following the Black Death, the pace at which conditions of life alter causes widespread misery and discomfort, and probably at no time in our history was the whole structure of society altered so rapidly and so radically as during those vast changes that occurred in industry and society between 1760 and 1840. At such times it is the weakest socially—that is to say the poorest and most dependent—who suffer most, for they are the least able to look after themselves; and the others who are more fortunate have no time to think of any one else until they on their part have become adjusted to the new order of things.

The condition of the workers varied according to the branch of the trade in which they were engaged: most of our information comes from the reports of the committees which the Government appointed from time to time during the nineteenth century to inquire into the state of affairs in the various trades. These do not tell us much about the spinners in the woollen trade. There were naturally not very many of them after machinery had been introduced: the most skilful men had been kept on, largely to supervise the work of women and children, and they earned fairly good wages. In 1819 round Leeds they were making 20*s.* to 25*s.* a week for a day of fourteen to fifteen hours, which included two hours allowed off for meals. But in that same year the employers forced on them a reduction of 5*s.* There were unions, such as the General Union of Weavers and Spinners, which had 5,000 members; but they were loose and not well organized.

In 1802 the finishers in Wiltshire started a campaign and seemed at one time likely to attain their object. Their work was to raise a nap on the cloth by brushing it with teasels, and then to crop off this nap so as to give a close, velvety surface to the cloth. A machine had been invented as far back as Tudor times, called a gig mill, which was a cylinder about a yard in diameter, covered with teasels and revolving between two upright posts. This could do in twelve hours work which by

hand would have taken eighty-eight. But gig mills had been forbidden by Parliament under Edward VI. Also, under Philip and Mary, the number of looms any clothier living outside a town could possess had been limited to one; while under Elizabeth a seven years' apprenticeship in the woollen trade



CRANK MILL, Morley, Yorkshire. Built in 1790, this mill was driven by steam, and was the first to be erected in the neighbourhood

had been insisted upon. Gig mills were reintroduced into Gloucestershire and Yorkshire about 1740; the system of apprenticeship by 1800 had generally fallen into disuse, and in the struggle of the small masters in Yorkshire against the big capitalists the question of limiting the number of looms was very important. What the Wiltshire finishers wanted in 1802 was to bring about the reinforcement of these three Tudor Acts. The

movement was organized by men who had been discharged from the forces after the Peace of Amiens, and who found there were no longer openings in their old employment. The centre of the organization was at Trowbridge, and close communication was kept up with Yorkshire; only those men were allowed to work who held a ticket issued by the union, and this ticket held good in Yorkshire. The attitude of the clothiers in the south-west was conciliatory, and had it not been for the Combination Laws some friendly settlement might have been arrived at. But this was impossible, since the workers were all the time liable to a charge of conspiracy. In Yorkshire the finishers, backed by the other workers, succeeded in stopping most of the gig mills. Actions were brought against the mill-owners for disobeying the three Tudor laws; but the men could not prove that the gig mills of Edward VI's time were the same as the gig mills then in use. Funds were raised and a petition sent up to Parliament in 1803. The attitude of the Government was not unfriendly; the matter was suspended for a year to enable further inquiries to be made. But the Napoleonic war broke out again: the Government was too busy to attend to the finishers; and when in 1806[1] a committee did sit, they recommended that the statutes should be repealed, since they were convinced that the industry would not suffer. They also reported very strongly against the union among the finishers, and the fact that they were in such close connexion with their fellow workers in Yorkshire. This seemed to them very suggestive of a popular movement on the lines of the French Revolution, and was to be condemned accordingly. The Acts were therefore repealed in 1809: the Luddite riots and the smashing of machinery were the result. The most famous riot was the attack on Mr. Cartwright's mill at Rawfolds, Liversedge, in 1812. This attack is

[1] Our allies the Austrians and Russians had been heavily defeated at Austerlitz in December 1805. Pitt, on hearing the news, had exclaimed, 'Roll up that map (of Europe); it will not be wanted these ten years.' On the 23rd January 1806 he died, worn out by anxiety. For the finishers the situation could hardly have been more unfavourable.

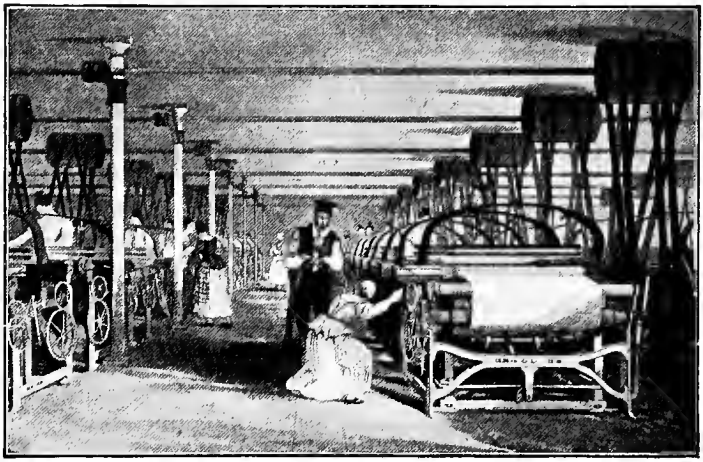
described in *Shirley*. Contingents came from Halifax, Huddersfield, Liversedge, Heckmondwike, Gomersal, Birstal, and Cleckheaton; some 150 men in all. The Leeds contingent arrived late after the firing had begun. The 'garrison' was prepared, and, as usual in these attacks on mills, comparatively little damage was done.

The riots were general. In Lancashire they were frankly against the cost of food. Mr. Prescott, Rector of Stockport, tried to help, and obtained a 2*s*. rise in wages, but the manufacturers afterwards recanted. In the Midlands the riots were directed against the stocking frames; but, as in the North, they were quite as much prompted by poverty and a desire for decent conditions. A bill was passed in Parliament making frame-breaking punishable by death. Byron protested vigorously against it in his maiden speech in the House of Lords, as did the Nottingham authorities, whom it was designed to help.

Among the woollen weavers in Yorkshire organization came later, since the trade was mostly carried on by small holders. But the attempt to reduce wages[1] 5*s*. in the pound led to the rise of a strong union round Dewsbury and Huddersfield in 1822, and men were urged to join the union 'in order that you may become men'. Relations between employers and employed had been strained for a long time, owing to continued complaints that the wool or yarn given out to be worked up was stolen. It was obviously very difficult to keep a precise check on it, and to say exactly how much cloth a given amount would produce. In 1777 the masters managed to get the Worsted Acts passed, which gave to the Justices the right to issue search warrants for stolen material, and provided for the arrest of any one 'reasonably suspected' of carrying stolen goods. That is, a man was assumed to be guilty until he had proved his innocence. The

[1] The wages of weavers after 1817 were not bad according to the standard of the day; they varied very much, and the estimates in 1825 range from 17*s*. per week up to as much as 30*s*. in the case of exceptionally skilled men. This was due to the fact that the looser thread used in the woollen weaving would not stand the somewhat rough power loom; and thus for a time the weavers remained largely unaffected by machinery.

attempt to introduce power looms embittered the existing hostility. In 1822 one was set up at Shipley: the weavers trooped in from the surrounding districts and it was triumphantly destroyed. The same fate befell those set up in Bradford a couple of years later. But power looms had come to stay. The best weavers, who were kept on to work them, benefited. With the less skilful it was otherwise: by 1838 there were 14,000 hand-loom weavers in Bradford who were only making 6*s.* to 7*s.* a week.



POWER-LOOM WEAVING ABOUT 1830

It was the same in the case of the wool-combers. Originally one of the most important classes of men in the industry, they earned good wages, 20*s.* to 24*s.* a week when times were good, though out of this they had to provide for the washing of the wool, &c., and for children to help them. They were as a class neither thrifty nor orderly; but they were well organized and they had more than once carried out a strike successfully. The introduction of Cartwright's combing machine came as a heavy blow to them: a petition to Parliament against it was unsuccessful; but as the machine was at first not very effective, and

they were well organized, they did not suffer much. In 1825 they celebrated with their customary enthusiasm the grim festival of their patron saint Bishop Blaize (who in the second century had been martyred by being torn to pieces by iron combs). But the Combination Acts had been repealed in 1824: there was an outbreak of strikes all over the country, and the Bradford wool-combers struck also. Their wages at that time varied between 14*s.* and 23*s.* per week for a fifteen-hour day—while a weaver at the same time was getting 10*s.* to 12*s.* The weavers therefore joined the combers: the masters replied by a lock-out, attempting to starve out the union. The strike lasted twenty-three weeks, and 20,000 men were out of work. Strike funds were raised in all parts of the country, and at one time as much as £900 a week was being distributed. Feeling ran high: there was rioting and intimidation. The masters asserted that the wages were high. The men retorted that those figures were obtained by adding the wages earned by the children, and they gave a striking picture of the child labour employed: the children rise between five and six in the morning and work till seven or eight at night: 'they lead a life of wretched misery and die immaturely.' But the masters were too strong: the men crept back again on the old terms, and the strike had done nothing except injure the trade of the town and hasten the introduction of the combing machinery.

Thus by the end of the first quarter of the nineteenth century the Yorkshire woollen industry was feeling the full force of the sudden adoption of the new methods and machinery. At first the conditions were very bad. Deaths occurred frequently from the bad air in the factories, as well as from unguarded machinery. The long hours, the bad plan of sleeping in, the wretched hovels outside in which the workers lived, the fact that whole families worked, all combined to make a decent home life almost impossible. Wages were low and prices were rising—the cost of food always goes up during a war and generally for a long time after. The children suffered most: it was impossible in their first months of life for them to be properly tended by their mothers,

whose poverty drove them back to the factory as soon as they could return. So the children were handicapped in life's race from the moment of their birth.

Going early to work at the factories—many went as soon as they could toddle; it was quite common to see them carried there—undermined what health a neglected infancy left them and robbed them of 'their little holiday of childhood'. Factory life stunted growth, and the close, and often hot, damp air affected their physical health. In the worsted mills, where Arkwright's water frame was used, the spinners were usually young persons, and here the conditions were very bad. A girl, giving evidence before the 1833 Commission, said in 1824 she started work when she was nine. The hours were from 6 in the morning to 7 at night, with three-quarters of an hour off for meals: the wages 3*s.* to 3*s.* 6*d.* a week. When she was ten the mill changed hands: she then worked from 5 in the morning till 9 at night, seven days in the week. For that her wages was 6*s.* and a few odd coppers: soon after this she began to go lame, 'having to crook my knee to stop the spindle', at last she had to go to the infirmary, a cripple. The early Factory Acts gave no remedy in a case like this, since they only applied to the cotton industry or to apprentices. The *Leeds Mercury*, 30 October 1830, stated that the hours for children in worsted mills were 13 with half an hour off; and in woollen mills 15, with 2 hours off. It was of this that Mr. Michael Sadler was thinking when in moving the second reading of the Factories Regulation Bill in 1832 he said, 'You have limited the labour of the robust negro to 9 hours: but when I propose that the labour of the young white slave shall not exceed 10, the proposition is deemed extravagant.'

Most serious of all, probably, was the effect of the life upon their young minds. Mrs. Browning has described it:

> For, all day, the wheels are droning, turning—
> Their wind comes in our faces—
> Till our hearts turn, our heads, with pulses burning,
> And the walls turn in their places,
> Turns the sky in the high window blank and reeling,
> Turns the long light that drops adown the wall;

Turn the black flies that crawl along the ceiling—
All are turning, all the day, and we with all.
And, all day, the iron wheels are droning;
And sometimes we could pray,
'O ye wheels' (breaking out in a mad moaning),
'Stop! be silent for to-day!'

The labour of children was cheap, therefore it was sought. Plentiful as labour was, owing to the changes in the ownership of land and the eviction of the smaller tenants, more was wanted, and a regular system grew up of 'apprenticing' pauper children from the workhouses into the factories. 'It is a very common practice', wrote Romilly in 1811, 'with the great populous parishes in London to bind children in large numbers to the proprietors of cotton mills . . . at a distance of 200 miles. . . . The children, who are sent off by waggon loads at a time, are as much lost for ever to their parents as if they were shipped off to the West Indies. The parishes that bind them get rid of them for ever, and the poor children have not a human being in the world to whom they can look for redress . . . from these wholesale dealers whose object it is to get everything that they can wring from their excessive labours and fatigue.'[1] Some manufacturers agreed to take one idiot with every nineteen sane children. William Thom's poem 'The Mitherless Bairn' sounds a little mawkish and sentimental to some of us to-day. But Thom was himself an apprentice in a cotton mill in 1808, when he was ten years old, and knew at first-hand what he was talking about.

Binding children from the overflowing workhouses of London as apprentices to masters who practically became the owners of the little victims they were paid to teach, was not, of course, confined to the textile industries. George Crabbe tells of the brutal East Coast fisherman Peter Grimes, who

. . . had heard there were in London then—
Still have their being!—workhouse-clearing men,
Who, undisturbed by feelings just or kind,
Would parish-boys to needy tradesmen bind;
They in their want a trifling sum would take,
And toiling slaves of piteous orphans make.

[1] Walpole, *History of England from 1815*, i. 163.

If fines in the mills were heavy for adults, punishments were brutal for children. It is difficult for us to believe that Pitt could have advocated that children should begin to work at the age of five, or that children should have been kept at work from 5 in the morning till 9 at night. Flogging was frequent if only to keep the children awake, and parents flogged their own children to save them from a worse flogging by the overseers. It is true that there were parents who pushed their children into the mills as early as they could. A brutal system was bound to produce brutal parents. It is true that the best manufacturers tried to improve the system, and to push the Government forward into making laws to restrict and lighten child-labour. It is true that through all the earlier part of the Revolution the country was at war and that the pursuit of wealth was a matter of national importance. It is true that after the wholesale murders of the Revolutionaries in France, England was justified in restraining all semblance of similar outbreaks at home. But all these considerations do not justify the heartless treatment of the children. It is a dangerous thing for one generation to judge another. It is easier to discover what men did than how they felt, to observe actions than to understand motives. Probably Queen Mary felt as righteous in burning Protestants as we feel when we condemn her for doing it. But whatever excuses may be made, the treatment of children under the Industrial Revolution must remain one of the blackest pages in the history of Britain. 'Never lower your moral standards,' wrote Lord Acton. 'Let no man and no cause escape the undying penalty which History has the power to inflict on wrong.' It is difficult to see how any historian, in spite of all temptations, could acquit the Industrial Revolution of its brutal exploitation of these innocent little victims.

The condition of the worker was all the harder in that he had not yet obtained any political power. The Reform Bill of 1832 marks the end, not the beginning, of the first phase of the Industrial Revolution, and did not enfranchise the workman. The crowded new towns, which were ill built and unplanned, afforded no outlet for normal interests and activities. The

Church was at a low ebb, and though some parsons championed the workers nobly—the Rev. J. Hodgson of Jarrow risked his own fortunes in drawing public attention to accidents in the collieries, and the Rev. G. S. Bull, Vicar of Bierley, a parish in Bradford, took a very active part in the movement for a ten-hours day—many parsons were hampered by being magistrates, and so being enlisted in advance on the side of suppressing complaints rather than encouraging them. As magistrates it was their duty to put into force the laws against efforts to raise wages. Moreover, the population had shifted so rapidly that churches were few in the new centres of population, and the parishes therefore understaffed and unready to meet the new call that was made upon them. The body of Methodists, founded by the great churchman John Wesley, probably did most to steady the new working classes and to teach them the truths of religion. Wesley lived through the first thirty years of the Industrial Revolution : he died in 1791. Among his strongholds he could count centres of the woollen industry like Leeds, Halifax, and Huddersfield, and one can read in his *Journal* of the extreme beauty of many parts of the West Riding that are now smoke-begrimed. At their Methodist chapels the workers found new interests and activities, and in the Sunday schools they got some education. The Evangelical Movement also, which founded no new Church,

JOHN WESLEY, 1703–91
Founder of Methodism

influenced all existing sects and strengthened and deepened religion. Among the earlier evangelicals were Mr. Grimshaw, Vicar of Haworth and friend of Wesley, and Henry Venn, Vicar of Huddersfield. Their great laymen were the poet Cowper and the Tory member for Yorkshire, William Wilberforce. Their educationist was Robert Raikes, a printer of Gloucester and great promoter of Sunday schools. The Methodist and the Evangelical did much for the religion of the new working classes. But the doctrine that this life is not everything, that the world is a bridge—that the end is elsewhere, and that each man carries his happiness within him, called for a patience that, under the drab conditions of a century ago, was beyond the attainment of the average worker. Impatience was more natural than patience, and, though combining together to get better conditions and higher wages was till 1824 against the law of the land, it went on increasingly, with rioting and without, and absorbed more and more of the workers' interests.

Beside the humanitarianism inspired by the Church, by the Methodists, and by the Evangelical Movement, must be ranked that indignation against tyranny and oppression which formed the better side of the doctrines of the French free-thinkers. Our own poets saw the condition of things clearly enough—not only as they were from the outside, but as they affected the lives of the workers. Blake wrote of 'those dark Satanic mills', and boldly declared that

> Throughout all these human lands
> Tools were made, and born were hands.

Wordsworth thus describes the boy in the mill:

> His raiment, whitened o'er with cotton-flakes
> Or locks of wool, announces whence he comes.
> Creeping his gait and cowering, his lip pale,
> His respiration quick and audible;
> And scarcely could you fancy that a gleam
> Could break from out those languid eyes, or a blush
> Mantle upon his cheek. Is this the form
> Is that the countenance, and such the port,
> Of no mean Being? One who should be clothed

With dignity befitting his proud hope ;
Who, in his very childhood, should appear
Sublime from present purity and joy ! . . .
— Can hope look forward to a manhood raised
On such foundations ?

The age was not without its philanthropists. It produced John Howard and Elizabeth Fry to work for the improvement of prisons ; Thomas Clarkson and William Wilberforce[1] to fight for and obtain the freedom of slaves, in defiance of all commercial considerations ; Dr. Percival of Manchester to fight for the child workers, and Robert Owen for education and co-operation. There were not wanting good employers, men who were as anxious for better conditions as the workers themselves. John Wood[2] of Horton Mills in Bradford and John Fielden of Todmorden fought for a shorter working-day and applied it in their own factories. Oastler, fresh from the emancipation of slaves in the West Indies, thought the condition of factory workers in Bradford worse than that of the slaves he had helped to free. But industry was crystallizing into a system : nothing effective could be done except by State regulation.

What militated more than anything else against these reformers was a policy—known as '*laissez-faire*' (i. e. let things alone)—which had been making headway in England since 1688. When the gild system decayed the State took upon itself the duty of fixing wages at a fair price and maintaining the standard of life. Elizabeth laid the execution of this duty upon the Justices of the Peace. James I re-enacted Elizabeth's statute and laid it down that ' If any clothier shall refuse to obey the said assessment of wages and shall not pay so much wages as shall be appointed, every clothier so offending shall be under penalty '. The Stuarts

[1] A vision of what might have happened in the world if the main current of opinion had not been turned definitely against slavery before the ' Industrial Revolution ' had fully developed is suggested in Mr. G. M. Trevelyan's Essay, *John Woolman, the Quaker*.

[2] John Wood in his own mill limited hours for the 500 children employed to ten ; provided seats for them ; practically abolished the use of the strap as a form of punishment, and set up a school, which children under thirteen had to attend for two hours a day.

honestly desired to satisfy the workers, who were pressing for an enforced assessment of wages. The position of the State was clear. It had assumed the duty of maintaining the standard of life. The Statutes authorizing due assessment of wages remained upon the Statute book. But after 1688 they were seldom enforced. The age of Capitalism was beginning. The fixing of a minimum wage—the Stuarts had fixed one—was naturally not a thing the average employer would go out of his way to ask for. So the State let this duty, which it had itself assumed, lapse. In 1728 an attempt was made by the Gloucestershire Justices to revive it, but the opposition of employers proved too strong. In 1756 some of the old Elizabethan assessment clauses were re-enacted. The conscience of the State was not quite easy. But the clothiers brought forward a petition against this, on the grounds that it was unnecessary, since industry was sufficiently protected by competition, and secondly that it was actually pernicious, since laws advancing the price of labour advanced the cost of manufacture, and by so doing reduced the trade of the nation. There was the *laissez-faire* doctrine—twenty years before Adam Smith published his *Wealth of Nations* and fifty years before the 'Manchester School' caricatured his teaching. The clothiers on this occasion induced the Justices to refuse to assess wages. The weavers then went out on strike and for six weeks the countryside was in an uproar. The weavers' leaders then met the employers at Stroud and put forward their old Petition of 1728. The clothiers agreed to a Committee of Masters, but would have no State regulation. This was rejected and there was more violence. To pacify the country the Justices then assessed the wages, and the weavers returned to work. But the clothiers did not observe the assessment, and they agitated for the repeal of the Act and got it. By that repeal the State renounced its right of assessment, and the opposite policy—which is *laissez-faire*—obtained thereby legislative sanction in the textile industry. Thus on the very eve of the Industrial Revolution the old system lay dead, while the new was not yet born. In this dim, uncertain period of transition there arose the doctrine of competition—to

buy in the cheapest, and sell in the dearest market, instead of the mediaeval idea of selling at a 'fair' price. The new doctrine came at a time of awakening trade, when England was beginning to fight for her place in the markets of the world in the great economic wars of the eighteenth century. It was preached with the enthusiasm of a new gospel, and the worker felt its full severity.

The unfairness of this was the greater because of the combination laws,[1] which made it illegal for workers to mass together to exact better conditions. These laws, it should in fairness be noted, applied to masters as well as men; but in the new conditions of industry a master must have seemed to the worker to be almost a 'combination' in himself. To-day it is clear how enormously the associating together of large numbers of persons in factories and towns has added to their political power, by enabling them to act in unison. But when this massing together first began, united action was impossible except by defying the law. The policy of *laissez-faire* was applied to almost everything—for Adam Smith convinced Pitt and nearly all the chief men of the day—except the combination laws, which prevented the working man from banding together with his fellows, and the corn laws, which prevented his getting cheap food. In this state of things the evils became so great that Parliament was forced to be false to its principle of *laissez-faire*, and the first of a long series of Factory Acts was passed in 1802 limiting hours of labour for child apprentices to twelve, forbidding them to work at night, and providing for a minimum of education and clothing for them. The Act had little effect, for it was little enforced—but it marked the beginning of a new era, which for years approached but slowly. In 1832 workers from all parts of the West Riding—men, women, and children—went to York on a 'Pilgrimage of

[1] The first prohibiting statute was one of 1720, forbidding the tailors of London to combine, but also fixing wages and hours of labour for them. In 1725 combinations of clothiers were prohibited, but so was also payment in 'truck', the thing they had been combining to stop. But as the century went on Parliament adhered to prohibition without enforcing that regulation of wages and prices which was its proper complement.

Mercy ' to get shorter hours for the children. This was obtained. Two years later it was enacted that no child should work in a factory until he was nine, and that no child under eleven should work more than 48 hours in the week. One gets some insight into previous conditions by the provision that Christmas Day and Good Friday were henceforth to be holidays, as well as eight other half-days in the year. In 1847 the Ten Hours Bill became law.

Between 1795 and 1830 wages declined about 80 per cent., while the cost of wheat rose to almost double what it had been in the previous half-century. Oastler describes the weavers round Huddersfield carrying the cloth eight or nine miles on their backs to market: after paying expenses they were left with about 4*s.* 6*d.* a week to live on.[1] Their food was porridge and potatoes. At Nuneaton out of a population of 8,000 there were 1,000 in receipt of poor relief. Efforts were made to relieve the poverty by amendments to the Poor Law. In 1795 the Berkshire Justices, at their famous meeting at the Pelican Inn at Speenhamland, began the well-meant policy of supplementing wages from the rates. The result was that soon employers paid the lowest possible wages and the poor rate went up to absurd figures. None the less, the Speenhamland policy enabled the working classes to live, although in many parishes the overseers refused relief unless the children went out to work. In 1834, however, the Speenhamland policy was repealed by a new poor law which enacted that no relief should be given to those who were able to work, unless they went to the workhouse. This law achieved its object. The poor rate was reduced to a quarter of what it had been. But the poor found it almost impossible to live, and the Chartist riots followed. These riots were political in the

[1]

	Weavers' Wages per Week.	Price of Wheat per Quarter.
	s. d.	*s. d.*
1802	13 10	69 10
1812	6 4	126 6
1817	4 3½	96 11

After that, came a rise in wages. The average price per quarter from 1761–70 had been 40*s.*; 1771–80, 45*s.* 10*d.*; and 1781–90, 47*s.* 11*d.*

main. The first thing the worker had got from the Reform Bill of 1832 was the Poor Law of 1834 which took away his relief from the rates. The Ballad of the 'Hungry Forties' tells its own tale.

'Twere 'hungry forties' when I were a lad,
An' fowks were clemmed, an' weak i' t' airm an' brain;
We lived on demick'd taties, bread gone sad,
An' wakkened up o' neets croodled wi' pain.

When t' quartern loaf were raised to one and four,
We'd watter-brewis, swedes stown out o' t' field;
Farmers were t' landlords, jackals, an' us poor
Tewed in Egyptian bondage unrepealed.

I mind them times when lads marched down our street
Wi' penny loaves on pikes all steeped i' blooid;
'It 's breead or blooid,' they cried. 'We've nowt to eat;
To Hell wi' all that taxes t' people's fooid.'

. . . . . .

I went to wark when I were eight yeer owd;
I tended galloways an' sammed up coils.
'Twere warm i' t' pit, aboon 'twere despert cowd,
An' clothes were nobbut spetches, darns an' hoils.

Thro' six to eight I worked, then two mile walk
Across yon sumpy fields to t' kitchen door.
I've often fainted, face as white as chalk,
Then fall'n lang-length upon wer cobble-floor.

My mother addled seven and six a week,
Slavin' all t' day at Akeroyd's weyvin'-shed;
Fayther at t' grunstone wrowt, while he fell sick;
Steel filin's gate intul his lungs, he said.

With the account of the attack on Mr. Cartwright's mill at Halifax during the Luddite riots may be compared the hitherto unpublished account of an attack on a mill at Huddersfield during the Chartist riots, from the pen of one who was living there as a child at the time.

'About this time rumours reached our little ears that we should some day go into the town and see some very grand doings, bands of music, flags, and great numbers of people.

There was going to be a General Election, and as the country was much moved by a kind of rebellion, caused by some men called Chartists, the Election was expected to be a very exciting, if not a dangerous one. Of course we understood this in only an imperfect manner, but rejoiced in the prospect of the new excitement. Soon we heard that the magistrates had information that large bands of Chartists were walking through Lancashire and Yorkshire, determined to attack the mills and burn them to the ground, and that our town and neighbourhood was especially doomed. Gentlemen were sworn in as special constables, and had to patrol the streets all night. My father was amongst them, and we were much interested in seeing him dressed for his work, and mounted on a horse provided for him, our Dobbin being too old. After a while when all reports were quieter, the day came for the Election, and being calm, we were taken to the Market Place, and from the upper windows of one of the houses, we watched the people gathering before the hotel, and the arrival of carriages and cabs, all decorated with blue or yellow ribbons. The Tory candidate, Mr. O——, was staying with our Great-Uncle at Bradley Mills, about a mile from the town, and we eagerly watched for their arrival. We had heard that the dear old dog Neptune, a splendid Newfoundland, was to be decorated with blue ribbons and to accompany them. How we clapped our hands and called out "Neptune" when our Uncle appeared in his carriage, with the beautiful black horses, and Neptune running at their side. There was a perfect roar of welcome from the crowd of people, and we felt so proud as our Uncle and Mr. O—— stood up in the carriage and bowed their thanks. My Uncle was a great favourite, and was loved and respected by all for his kind manners and bold courage.

'Suddenly there was a great excitement amongst the crowd. We noticed that the shop-keepers were hastily putting up their shutters, and soon our old George appeared with a message that we were to go home immediately. Much to our disappointment we were hurried off, placed in a cab, and were at home in a few minutes. Then we were told that a great mob was approaching the town, carrying black flags with the word "Death" upon them in large white letters; and that the soldiers had been sent for, and every precaution was being taken to meet the mass of brute-force. Our gates were bolted, and the doors all locked, and climbing on to the broad window-seat of our nursery, we waited for what would happen. The band of Chartists would have to pass our house on its way to the Market Place. Hours

flew by and all was still quiet, we began to fear that we should see nothing, as it would soon be dark. At last we heard in the distance a muffled sound, a sensation as if the ground shook, and then we could see a dark mass. As it approached we saw that it was thousands of men, marching steadily on with a great black flag in front—no music, not a word, only the dull tramp, tramp, tramp of many feet. As the procession filed past we could bear it no longer, but rushed down stairs in mortal fear into the room where the rest were assembled watching the sight. My Mother looked pale and her eyes were full of tears: she had just heard that the Chartists intended to attack our Uncle's mills, Bradley Mills, and had sworn to kill him, that the rest of her brothers were to go to his rescue, also my Father.

'We heard afterwards that the Chartists marched steadily through the town, that they had met with no opposition, the soldiers had not arrived, the police and constables were a mere handful to the fearful mass of moody, determined men they had to oppose, and that the mills were doomed. But in the meantime, quietly, a brave band of gentlemen had assembled at the mill, and a small detachment of soldiers who happened to be quartered at a town about nine miles away were already at their post. Only a part of the rioters marched towards the mill, so that when they arrived they met with a repulse they little expected, and had to retreat and rejoin their main body without doing much damage. . . . As night came on we became dreadfully uneasy about our dear Father, and we none of us thought of separating, but remained all together in the parlour listening to every sound. The servants kept going to the gate to see if they could gather any tidings. But at our end of the town all was peaceful and quiet. . . . Early in the morning my Father was brought home supported by some men, and carried on to the sofa in the dining-room. He had been struck from his horse by a blow from behind, and though not dangerously injured, was unable to walk. After some weeks of careful nursing he was again able to go about as usual, but to the day of his death—he lived many years after—he was liable to severe attacks of pain in his back, which always vividly brought before us the dreadful anxiety of that day and night.'

It is no wonder that there were riots. Food was at famine prices. The Corn Law of 1815 had enacted that no foreign corn might be imported until the price rose to 80*s*. a quarter. The average wage was less than 2*s*. a day. The workers had no voice

either in local or in central government, and were tempted to hit blindly at the first thing they saw, which was the mills and the machinery. But they were dimly conscious of the truth that the economic development of the country had outrun its political development, and that nothing would be done till they themselves were represented in Parliament, a result the Reform Bill of 1832 did not achieve.

During the period covered by the revolution, there took place a remarkable increase in population, as the following table shows:[1]

1760	6,736,000	1811	10,164,000
1770	7,428,000	1821	12,000,000
1780	7,953,000	1831	13,896,000
1790	8,675,000	1841	15,914,000
1801	8,892,000	1851	17,927,000

In all the previous 70 years the increase had only been $1\frac{1}{4}$ millions: the population in 1688 was $5\frac{1}{2}$ millions. The increase mainly showed itself in the northern counties. In 1700 Lancashire and the West Riding were not in the first twelve counties for population; Somerset beat them easily. In 1750 Lancashire was fifth and the West Riding eleventh, and the northern towns were rapidly increasing in size. At the same time the decline of population in the west was beginning: Cobbett in 1821 mentions the falling off round Withington and attributes it to the change that had come over the woollen industry with the introduction of machinery; in Bradford-on-Avon there were in 1820 nineteen manufacturers producing 620 pieces of broadcloth a week; in 1842 the manufacturers had 'diminished to two' and the quantity was reduced to 100 pieces.

Until 1760 the bulk of the population and everything that was progressive had been centred in the south. Even after the beginning of the Industrial Revolution and on the very eve of the French Revolution and the great wars with France, it was the south that was anxious for reform. Pitt during the course of his life advocated almost every important reform that has been achieved during the nineteenth century. The Duke of

[1] No figures are certain before the first census of 1801, and even that was uncertain.

Richmond urged a programme that later, in almost every detail, became the programme of the Chartists. These things were checked by the horrors of the French Revolution, which for a time made ninety-nine Englishmen out of every hundred fear any change at all. When this time had passed and reform was again advocated the movement came not from the south but from the north. The class that sought enfranchisement by a Reform Bill of 1832 was the new class of mill-owners and manufacturers of Lancashire and Yorkshire. It was the workers employed by these mill-owners and manufacturers who supplied the motive force of the Chartist movement. And it was the north and not the south that organized the Free Trade movement, which, by achieving in 1846 the repeal of the Corn Laws and so lowering the price of bread, made conditions of life for the worker again tolerable.

Such were the great external features of the Industrial Revolution. The face of England was changed. Englishmen had known their land to be 'a land of brooks and water'. They now found it to be a land rich in minerals, a land 'whose stones were iron, and out of whose hills thou mayest dig brass'. The changes must have seemed amazing to the generations that first witnessed them. 'Nowhere does man exercise such a dominion over matter' said Macaulay in 1832. Nowadays we are accustomed to more or less startling inventions, like aeroplanes and wireless telegraphy. But until the period of the Industrial Revolution the march of material progress had been unhurried and the outward aspect of the world had changed but slowly.

This apparent dominion over matter was only one side of the picture. The Industrial Revolution was as much a social revolution as the French Revolution—without, however, the latter's ideal of citizenship, of liberty, fraternity, and equality. The peasant or yeoman class, owning rights over the land it occupied, almost entirely disappeared, while a new class of capitalist manufacturers arose. These men were not of the old landowning class. The Duke of Bridgewater and the titled owners of coal mines were the exception, not the rule. The new mill-owners

were for the most part men of humble origin.[1] But they soon obtained political power. Money, to build fleets, to equip armies, to purchase munitions of war to fight France, was of first importance to the State, which lent a ready ear to those who were able to supply it. The new class of manufacturers was soon able to dictate the policy of the Government.

The race for wealth and for quick returns changed the employers' attitude towards the work that was turned out, and the coming of machines caused the workman to lose much of the pride he had felt so long as his craft was done by his own hand. The tragedy of the machine was that, though it enabled men to make more things than had ever been made before, it deprived them at the same time of the joy of creation. Quantity became so overwhelming that considerations of quality fell into the background. Humane regard for the conditions under which the work was done was equally lost sight of. The pursuit of wealth, the tyranny of the machine, and the achievement of a big turn-over dwarfed all other considerations. One must remember that right through the midst of the Industrial Revolution the threat of invasion by Napoleon hung like a shadow over the land. The Martello towers round the south-east coast, and the military canal at Folkestone, Hythe, and Romney Marsh, stand as grim witnesses of the country's anxiety in those years. The national debt was increasing by leaps and bounds. The nation's burdens had never been heavier; it should never be forgotten that, out of a total war expenditure in the years 1793 to 1815 of 831½ millions, 391 millions, or nearly half, was paid out of taxation. The crushing weight of responsibility and anxiety left little room for sentiment or humanity.

[1] In 1844 John Hussey, giving evidence before a Parliamentary Committee, stated that 'the numerous woollen mills scattered throughout clothing villages of the West Riding are principally owned and occupied by clothiers in shares. They buy the land and proceed with the building; they borrow on mortgage the largest amount they can gain credit for, with which they pay for the building and steam engine; the machinery is obtained on credit. If times are good they will generally succeed not only in working off their incumbrances but in raising the condition of the clothiers themselves.'

Another new feature of work under the new conditions was minute and ever increasing specialization. Specialization had, of course, existed before. Every civilization as it develops leads to increasing division of labour. But specialization, in the sense in which we know it to-day, was unknown before the Industrial Revolution. In 1724 Defoe thought that the West Riding of Yorkshire was the only part of England that specialized in manufacture.

Machines are not of course bad in themselves, as the workmen who first suffered through their introduction thought. Machines

A MARTELLO TOWER. Built as a defence against Napoleon

are only tools, and the most complicated machine differs from a spade only in degree. William Morris allowed that machines were justified if they saved human drudgery. In the end machinery is bound to add to the good of the race, because it increases its power over material forces. It has been estimated that the steam-engine alone has added power to the world equivalent to the manual work of a thousand million men. But the invention of machinery came at a moment when the Government was so occupied with war that it had no time to consider changing conditions at home, and to provide for new needs. There existed neither the necessary civil servants and state departments on

the one side nor organized unions of workers on the other to regulate the dislocation and 'dilution' of labour which the introduction of machinery involved. The Agricultural Revolution which preceded the Industrial had meant the larger application of capital to farming. The new methods were too expensive for the small farmer. They required more capital and more land than he was master of. So he gave up the struggle, sold his land and turned to Industry. But in Industry he found the same story repeating itself: new processes were coming in, which also required capital. His lack of it placed him at the mercy of those who had it. The Napoleonic war came; power and wealth was what England demanded to win it, even at the price of mortgaging her future human resources. The victory of machinery was inevitable: as we now see, if properly regulated, it was not undesirable. But to the worker at that time it meant longer hours, lesser wages: it meant working at the pace of a machine which never tired: it meant, in short, becoming a part of that machinery. Against that the workers fought with all the courage and bitterness of despair. Out of that struggle there emerged a class war—Capital on the one side, Labour on the other, enemies instead of allies in the service of mankind. And of that bitter struggle we to-day are still reaping the fruits.

Just as, on the spiritual side, we have not yet felt the full effects of the Reformation, so on the social and economic side, the eruption which we call the Industrial Revolution has not ceased to rumble. We have been left with a population seven times as great as we had; with highly developed specialization in industry as a necessity in order to provide this population with what it requires; with quantity rather than quality as the object of a large part of production; with wealth [1] rather than well-being as the accepted standard of value. Labour is now organized in vast Trade Unions which wield power at least equal to that of the employers. The points that seemed so remote when the Chartists

[1] The very meaning of the word wealth has changed: in the Prayer for the King's Majesty and in the Litany it means external happiness, the opposite of tribulation, not riches.

fought for them—manhood suffrage, vote by ballot—have long since been won, and the working classes command a vast majority in the electorate. Education, denied in 1800, is open to all: indeed it is compulsory for all. A century of Factory legislation has improved the conditions of work beyond recognition. All this has been achieved, thanks to the peculiar genius of the English people, virtually without bloodshed; and, though the bitter feelings aroused by the Industrial Revolution have not yet passed away, the present age, unlike that of a century ago, is conscious of its maladies and its shortcomings, and is trying honestly and strenuously to overcome them.

CHAPTER VIII

THE HOME OF THE SHEEP

WE have seen that one of the reasons which led the Government in the sixteenth century to prevent the growth of a factory system was their determination to keep England self-supporting—that is, that she should not depend on any foreign country for the supply of food or of any other necessary commodity. Therefore they decided that it was better for England to be mainly an agricultural country. But since about 1750 the tendency has been the other way: England has become increasingly a manufacturing country; her population has grown enormously and so has her wealth, but it has also followed that she has become more and more dependent on foreign countries not only for her food but also for the raw materials for her manufactured goods.[1] Germany during the years preceding the war always endeavoured to keep a balance between agriculture and manufacture; how nearly she succeeded, the course of the war showed. For England this is impossible: the country is too thickly populated and the demands of her industries are too great for her to be self-supporting. She has, however, an advantage that neither Germany nor any other

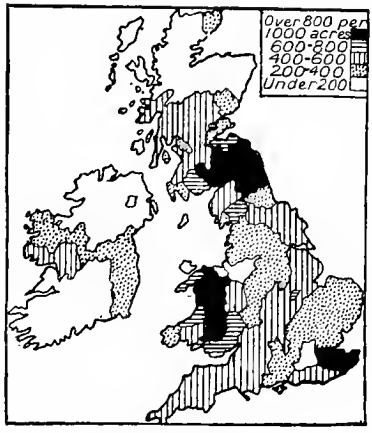
[1] One effect of Free Trade in the Woollen Industry was to diminish the amount of wool grown in the United Kingdom.

great trading Empire of modern times has possessed. Holland, whose greatness in the seventeenth century depended on her trade, fell because the countries which supplied her with goods closed their ports to her, and England wrested from her the supremacy of the seas. Thus she lost the profitable business of carrying the goods of other nations. Portugal fell in the sixteenth century from lack of men. She traded mainly with unsettled countries such as India: she required troops to garrison her trading posts on land and a fleet to protect her commerce at sea. She also had to defend herself against Spain, always eager to absorb her wealthy little neighbour; and her population was unable to meet all these demands made upon it.

But within the bounds of the British Empire is produced a very large proportion of the goods that the British Empire itself requires, and the self-governing dominions not only do not require to be garrisoned but are in themselves a source of strength. Provided therefore Great Britain retains her command of the seas, she is in the main safe against those elements of weakness which have led to the downfall of other trading empires. The only serious exception to this, at present, is the case of cotton, only a small percentage of which is produced within the Empire; and it is to remedy this that the British Empire Cotton Growers' Association is co-operating with the Government to increase the supply of raw cotton from our own territories.

There is, however, one possibility that must be borne in mind, that countries which are at present producers of raw material may themselves become centres of manufacture, or thatcountries which at present manufacture little may increase their manufactures and so become more serious competitors for the world's supply of raw material. A conspicuous example in the cotton trade is the United States, which is itself using more and more of its own raw cotton and having less available for export to Lancashire. Japan is another country whose competition is becoming more formidable both in cotton and wool. But those countries which produce wool are not in general suited, from reasons of climate, for its manufacture on a considerable scale.

In mediaeval times the main source of the wool supply was, of course, England itself; apart from other reasons, there were frequent wars on the Continent, and sheep are too easily caught and eaten to flourish well in war time. The wool was, compared with that produced to-day, coarse and full of hairs; though it was less coarse in the western counties. The fleece of the mediaeval sheep was light, averaging a little more than 1½lb.—and losses from disease were heavy, amounting to about 20 per cent.[1] But no serious attempt could be made to improve the breed of sheep until it was possible to separate the good sheep from the bad—that is, till some form of enclosure was introduced. That started in the fifteenth century, after the Black Death: it is then that we find farmers paying high prices for fine rams.[2] By the eighteenth century, before the breed of sheep had been seriously improved, the weight of the fleece had risen to 5 lb.[3]



DISTRIBUTION OF SHEEP

The finest wool of all was not produced in England but came from the merino flocks of Spain. The merino is frugal even among sheep, and thrives where most animals would starve.

[1] The disease was 'scab', for which the only remedy was tar. Hence the import of tar, and the proverb 'to spoil the ship (= sheep) for a ha'porth of tar'.

[2] Harrison, in his *Description of England* in the time of Elizabeth quoted above, wrote 'Our sheep are very excellent, sith for sweetness of flesh they pass all other. And so much are our wools to be preferred before those of Milesia and other places, that if Jason had known the value of them that are bred and to be had in Britain he would never have gone to Colchis to look for any there.'

[3] In 1700 the weight of a sheep's carcass was 2 stone; in 1800 it was 6 stone.

Its wool is the softest and whitest in the world. But not very much of it was produced, and the fibre is so weak that it could hardly be woven without an admixture of some other coarser kind. For a long time Spain guarded this asset very jealously; but during the eighteenth century other countries managed to get hold of some of these merinos to cross with their native sheep and so to produce a wool nearly as soft as the merino, but much tougher. For instance, a French wool-grower in 1762 began to make experiments: the wool from 300 native sheep was sold for £17; he then crossed native with Flemish sheep, and the value of the wool clip went up to £28 6*s.* 8*d.* Then in 1783 he got some merinos, and the wool from 300 sheep was then sold for £100. The Dutch also obtained some and sent them to the Cape. In 1786 George III, who took a keen practical interest in farming, secured a few of the prized merino sheep from the royal flocks in Spain, thanks, it is said, to the wife of the Spanish ambassador, in return for the gift of some cream-coloured Flemish horses similar to those which draw the English king's state carriage. These merinos were used to improve the breed in England. Captain McArthur, who had been anxious at the very beginning of the nineteenth century to import sheep into Australia, where the pasturage, he thought, would be well suited to them, managed to obtain some sheep of the improved breed from South Africa, whither they had been taken; and England has reaped the benefit in that supply of raw wool which has been increasingly the mainstay of her woollen manufactures.

A hundred years ago the chief wool-producing countries were England,[1] Germany, and Spain. But the ravages of the Peninsular

[1] The English sheep fall into three classes. (1) Longwools: Leicesters, Cotswolds, Lincolns, Kentish or Romney Marsh, Devon Longwools, South Devon and Wensleydales. (2) Shortwools: Southdowns, Oxford Downs, Hampshire Downs, Shropshires, Suffolks, Ryelands, Somerset and Dorset Horned, and the old Wiltshire sheep. (3) Mountain sheep: Cheviots of Northumberland, the Herdwicks of Cumberland and Westmorland, the Lonks of Yorkshire and Lancashire, and the sheep of Dartmoor and Exmoor. Besides these the British Isles have the Cheviots of Scotland, the Roscommon of Ireland, and the Welsh mountain sheep.

War, and the restrictions which England placed upon the importation of Spanish wool proved the death blow to the Spanish wool industry; Spain's flocks, once the envy of the world, have now deteriorated to such an extent that for export the wool is practically worthless. The German supply has likewise fallen off; the wool from the Silesian merinos, the descendants of the flock given by Spain to the Elector of Saxony in the middle of the eighteenth century, was at one time considered the finest in the world. But the competition of Australia proved too much: Silesia now finds it cheaper to import from Australia than to produce the wool herself. Her flocks have fallen from 30 millions to 7 millions, and Silesian wool is now only used in England in small quantities, mainly for fine cloths in the west of England.

The sheep itself is one of the most universal of creatures. Easy to domesticate, a provider of food and clothing, in all countries from the earliest times the sheep has been a real friend to man.

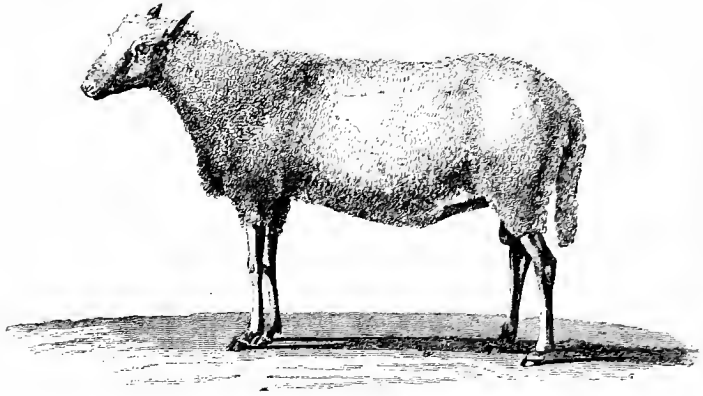
> They guard us awake, they protect us asleep;
> Night and day thank Heaven which gave us the sheep.

But the original type of sheep was hairy rather than woolly; it is only as the result of long and careful breeding that the thick woolly fleece has been produced. The Asiatic flocks in Turkey, India, and China, which have not been carefully bred, still have more hair than wool; their fleeces are used in the manufacture of carpets for which the East is famous. The same applies to Russia, where there are large numbers of sheep but the wool in general is poor.

The chief countries outside Europe which supply the raw wool for manufacture, are Australia and New Zealand, South America, and South Africa.[1] But in Australia, New Zealand

[1] The *Wool Year Book* of 1913 gives the total sheep population of the world in that year as 626,000,000, of which fully one-third in actual numbers and more than one-third in wool production are contained within the British Commonwealth. See table overleaf.

and the Argentine, mutton is competing with wool: the first ship-load of Australian frozen meat reached London in 1880. Before the days of cold storage, it was impossible to send meat from these countries to Europe—in the early days of South America, hundreds of thousands of cattle were slaughtered annually, simply for their hides and hooves. The flesh was left to rot on the pampas; hence, an early writer says, he had never seen anywhere dogs so plentiful or so fat! But the same breed of sheep does not produce the best wool *and* the best mutton:



A CHEVIOT RAM, 1794

the merino has a magnificent fleece, but its limbs are small, and the flesh tough. When the great farmers began to improve their breeds, it was wool alone they were thinking of. In recent years, however, with the increasing demand for cheap food in Europe and the development of cold storage, those parts of the Argentine

Europe (of which the United Kingdom had 31,082,461)	179,516,437
Australia and New Zealand	117,011,654
Asia	116,058,874
Africa	51,429,279
North America	59,047,680
South America	109,693,142
	632,757,066

and Australasia which have facilities for transport to the coast, have been turning their attention more to mutton, and letting wool take second place. In this way the flocks will produce, as it were, a double return: part can be sold, as lambs, for meat, and the store sheep shorn for wool. This is especially suitable in the Argentine where the soil is too good for wool; for the wool-bearing sheep thrives best on a dryer, poorer pasture.

A CHEVIOT RAM, 1921
(The Conqueror)

New Zealand is doing the same, as is also Australia in the farms on the coast, where the tendency has been to break up the big sheep-runs into smaller holdings. But in the 'back-blocks' wool still reigns supreme. Not only is the pasturage more suitable for wool, but lack of transport renders the export of mutton impossible. A lamb may be fat enough when he starts; but by the time he has been driven some hundreds of miles to the railway, he is a very skinny lamb indeed. If this tendency to breed for mutton continues, it may make a great difference

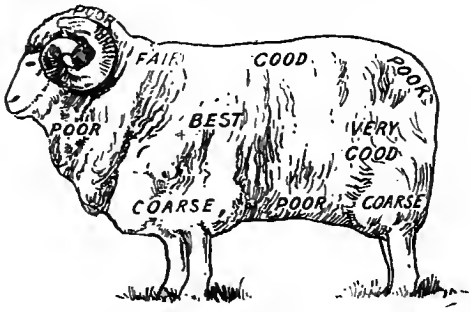
to South Africa. On the veldt the merino flourishes and, though there are a large number of 'woolless' sheep there still, breeds are rapidly improving. In 1917, 111,000,000 lb. of wool were exported, and there is no reason why the amount should not increase.

To appreciate the conditions of the wool-growing industry in South America certain facts in the history of that Continent

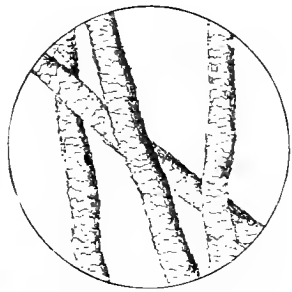
AN AUSTRALIAN MERINO

have to be borne in mind. Spain was its first owner, and the Spanish Conquest has left its legacy in the national temperament and in conditions of land tenure. After the blood-stained romance of the Conquistadores came the period of orderly administration. Then Spain found herself faced with the almost inconceivable vastness of her new possession: the Argentine itself is two-thirds the size of the whole United States; and the conquerors were few. So there arose those enormous grants of land, often bigger than an English county, held under feudal

conditions and strictly entailed, so that they passed undivided from father to son. The Indians, in theory at least not ill treated, were yet the servants of the conquerors ; and the Church, which did so much to adjust the relations between Spaniard and Indian, aimed at a benevolent despotism and the creation of a feeling of blind loyalty to Spain. Thus there were, till the early years of the nineteenth century, two classes of society, the great landed families and—the rest. During the last fifty or sixty years, emigrants have gone to the Argentine in large numbers, mostly Italians and Spaniards from the north ; but it is to the



AUSTRALIAN MERINO, showing sortings



MERINO WOOL-FIBRE, magnified 450 diameters

towns that they have gone, to take up small businesses, or to become labourers on railways. Out in the ' camp ', the open pampas, there still remains the old division, the great folk owning the *Estancia*, and the *peon* or peasant who works it, paid a starvation wage, living in a hovel, perpetually in debt, as much a serf as his forefather in the Middle Ages, the raw material for any revolution.

So long as Spain retained South America its trade was throttled, since Spain kept a jealous monopoly. But when in 1808 at the beginning of the Peninsular War France seized Spain, South America refused to accept orders from a French Government at Madrid and the War of Liberation began. In the south San Martín, South America's greatest soldier ; in the north, Bolívar,

whose puny body held such a strange mixture of revolutionary enthusiasm and unabashed vanity, between them achieved the liberation of the Continent. They owed not a little, as they themselves would have been the first to admit, to Lord Cochrane, sailor and knight-errant, who afterwards played a no less glorious part in the Greek War of Independence, and to the nameless English legion, veterans of the Napoleonic War, whose bones lie scattered but unforgotten in the swamps and forests of the north. But in 1823 President Monroe, acting on a suggestion from Canning, in his message to Congress asserted the principle that the United States would not allow any European nation to interfere in the affairs of the American Continent. France was thus prevented from attempting to win back South America for Spain. The Republics, secure in their independence, started upon a career of development, stormy at times but so wonderfully rapid that Lord Bryce has said that in a hundred years the Argentine may be the equal of France.

Buenos Aires combines something of the glitter of Paris and the bustle of New York : its wide streets and open squares, its magnificent opera house and palatial clubs, the streams of motor cars, all speak of a society exuberantly wealthy, and fond of display. On the outskirts stretch miles of sordid shacks and hovels, the grim accompaniments to all this wealth ; and then the 'camp', a vast flat plain, with the grass in summer five feet high, broken rarely by the clump of trees clustering round an *Estancia.* For the rest, the horseman as he journeys is encircled by a never-changing horizon of grass meeting the sky some two miles away : there are no wide prospects, as there are no hills. Round Buenos Aires the 'camp' is seamed with a network of railway lines, to Santa Fe, San Luis, Bahia Blanca a rising port, and Mar del Plata. Westward the land is dryer, northwards more undulating. But the lack of fuel and of water-power (for the rivers are too sluggish) is likely to prevent the Argentine from developing industrially.

Looking to the future, when its great resources will be more adequately made use of, the Argentine is no longer content to

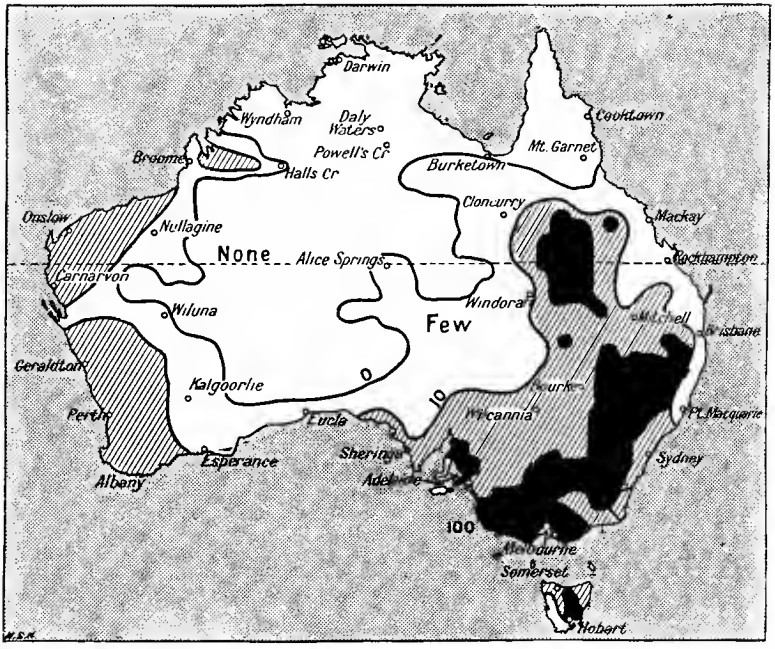
face only the Atlantic. One Trans-Andean line has been constructed to Valparaiso; another is projected, from Neuquén to Talcahuano: the Panama Canal is already open. South America now lies on a direct route to the Far East and will take her share in the great trade of the Pacific, the growing importance of which has been such a feature of recent years. That ocean is bounded on the one side by China, on the other by America, both countries of a size that the European mind finds it difficult to imagine (for Peru alone is as big as France, Austria-Hungary, and Germany, as they were in 1914), and both possessing resources, mineral and agricultural, which seem almost limitless. The countless islands, where Nature responds so bountifully to the labours of man, themselves contain a great reservoir of raw material. The trading activities among the islands of the great German firm, the Handels- und Plantagen-Gesellschaft, with its head-quarters at Apia, had aroused apprehensions in Australia as to the future of the Pacific: the German occupation of part of New Guinea had been one of the causes which helped to bring about the federation of the Australian States into the Australian Commonwealth. For Australia suspected that German trade was to be the preliminary to German annexation. Hence the 'trusteeship of the Pacific' is now one of the main points in Australian policy. Simultaneously there has taken place in the Northern Pacific the rise of Japan, an Imperialist and industrial power whose rapidly increasing population can only be fed by a corresponding increase in her trade. China lies at her doors, destined, in Japanese eyes, to be the great market for her manufactured goods; the Pacific Islands, South America, and Australia are the convenient sources whence she hopes to derive her raw material, and in their wool markets she has already become an eager buyer. Thus the Pacific forms, as it were, a world complete in itself, as yet undeveloped, but with every promise of a great future.

The Argentine lies on the fringe of this new world: it is the Panama Canal that has brought the two into close touch. But Australia lies in the very heart of it; and of late great developments have taken place there to enable it to play that part in

the New World to which it feels itself entitled. Geographical formation and climate have really made of Australia two almost distinct countries, the coastal Australia and the inner Australia; the latter being all the country inside a rough circle drawn about 400 miles from the coast. The coastal belt has a heavy rainfall—there are 20,000 square miles with a rainfall of 30 inches—which makes it damper than is necessary for sheep but good for farming, 40 acres being enough for a profitable holding. This policy of 'close settlement' is being encouraged by the Commonwealth Government, which insists on every occupant of land residing on it, and only holding a 'living area', and even lends money for providing stock and making improvements. The construction of locks and dams on the Murray and Darling rivers to conserve the water, the discovery of subterranean water in the interior, which can be tapped by artesian wells (at present these produce 300,000,000 gallons of water a day) and the development of a kind of wheat which is satisfied with less than 20 inches of rainfall, have all given a great impetus to agriculture. In 1918 Australia produced 80,000,000 bushels of wheat, a third of the total required for the Empire. Lack of markets and shortage of population (which Australia might have done more to encourage) have been the great hindrance hitherto; but the great development of cold storage is making agriculture a very profitable industry for these coastal regions.

The interior presents more of a problem. Much of it is beautiful country to look at, like an English park, only—there is no water. When man first came there, the grass was waving waist high: it seemed ideal sheep country. Man started to 'improve' it: the low scrub bushes were cleared. Then came the winds, and stripped the curious light Australian soil clean off and left exposed the hard red clay, like great ugly wounds. Man had upset Nature's equilibrium, more delicate perhaps in that isolated interior than anywhere else in the world. Sheep can live in the west; men cannot; and life for the sheep farmer is one long battle with a Nature which he is barely beginning to understand. The homesteads represent the forts, 50 to 100 miles apart.

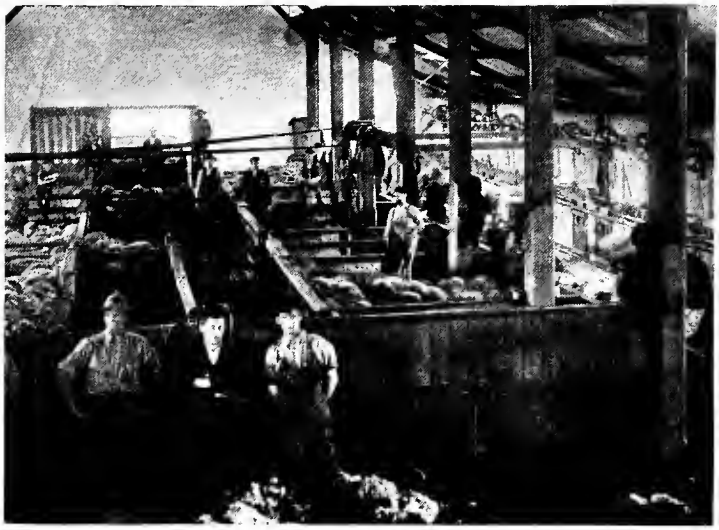
Between are the tanks built for the sheep: they are the lines of communication. If a traveller fails to find them, if he mistakes that which passes for a track, there is the grass around him and the sky overhead: nothing happens, just nothing: when he can go no farther, he lies down; and that is the end.



AUSTRALIA. DISTRIBUTION OF SHEEP
Important sheep areas shown in black; less important by diagonal shading

The sheep stations average about 100,000–200,000 acres, and carry about 1 sheep to 12 acres: the rent is 2*s.* 6*d.* a square mile. The paddocks are 100 square miles, 40 miles round the fence. The boundary rider who looks after the sheep, sees a man once in three weeks. The homestead has to be self-contained to an extent that we in Europe can hardly understand. The store supplies everything from flour and candles to a type-

writer, and a man must be able to turn his hand to anything he wants done—there is no one else to do it for him. The sheep, the centre of this incessant struggle, quietly feeds, save for one crowded five minutes of exciting life each year in the shearing shed, whence he is discharged, naked and protesting, to be kept alive during another year. For that is what it amounts to. Lack of transport makes it impossible to turn him into mutton. If



SHEEP SHEARING IN AUSTRALIA

he lives, that is to say if he, and not the drought, wins, he produces 5*s.* a year in wool.

When shearing time comes, the shearers appear, mostly on bicycles with their 'swag' strapped on handles or back wheel, in hard felt hats, making the round from one great sheep station to the next. They have their quarters, and elect their own cook who provides the meals—and very good ones—according as the general vote decides; for a shearing gang is a strictly democratic community. They are paid by piece-work, and it is the business

of the ' Boss ' to see that the sheep are there, ready to be shorn. On him falls the complicated business of mobilizing them ; there must be a constant stream moving into the home-paddock and out again, so that there is no congestion but yet always a flock waiting in readiness. The interior of the long shearing shed, polished with the oily fleeces, glistens a golden brown in the subdued light. The shearers are ranged down each side. Each

WOOL SORTING AND PACKING

two men have a pen from which they pick out the sheep, and a slide down which he is sent to join the flock outside when shorn. They work with electric clipping machines and shear about one hundred sheep a day, a ram counting as two. The belly and the legs are shorn first ; then the fleece comes off as a whole, is picked up by the boys and carried to the table, the flanks skirted off, and the rest goes to the wool classer who is in charge of the whole shed. He has four bins behind him—' First combing ' and ' Second combing ' : those are for the two qualities of long

stapled wool—over 1½ inches—which will be used for worsted : ' First clothing ' and ' Second clothing ', for the shorter wool used for ' Woollen '. Much depends on this classification when it comes to the sales. Buyers know what they are getting and if a station gets a reputation for careful classification its wool will fetch a higher price in consequence.

The wool is pressed into great bales, care being taken to prevent foreign matter such as bits of string getting in ; otherwise when the wool is woven into cloth this foreign matter will not take the dye in the same way as the wool and stands out as a blemish. The bales are stamped with the station mark, are loaded into bullock wagons, and taken off on their long journey to the railway.

CHAPTER IX

THE WOOL MARKET

THE great wool sales at Sydney take place in a large room shaped like a lecture theatre ; the auctioneer's stand is in the centre, and the seats rise up in tiers in front. The wool is sold at so many pence per pound : the bidding is usually by farthings, sometimes, after a certain figure has been reached, by halfpennies. The buyers have inspected the wool before the sale takes place : sample bales have been set out in a well-lighted room, and slit open. The buyers go through it and decide to what price they are prepared to go. The actual sale is a scene of uproar and excitement. If two or three buyers offer the same figure and no one is prepared to go higher, the man who *first* made the bid, gets the wool—and on those big purchases, the difference of a farthing a pound amounts to a large sum. Hence each buyer adopts some distinctive method of bidding—shouts, gestures, anything—to attract the auctioneer's attention ; and a wool auctioneer has need of a cool head, a quick eye, and plenty of determination. After a particular lot has been sold, the buyer

examines all the bales to see that they correspond with the description given. If any bale has not been stamped by the station from which it comes, it is withdrawn; for only the station on which the wool has been grown has the right to stamp it.

Besides the difference in grade or in kind—cross bred, merino, etc.—the main distinction is between scoured and greasy. Wool in its natural state, as shorn from the sheep, contains a large proportion of natural grease (from which afterwards lanoline is prepared). There are also various impurities—earth or sand, for instance, especially in wool that has come from dry and dusty climates, and all the burrs which stick on the sheep's long coat. When all this has been scoured out of the wool it loses from 30–40 per cent. in weight; the actual percentage of loss is a good deal determined by the district from which the wool has come: wool from the Argentine used to be notoriously bad in this respect. But in any case the buyer can never be quite certain how much will be lost in the scouring. This explains also the great care that is taken in the Australian shearing sheds to keep the wool clean and prevent any foreign substance getting into it. The bales are never fastened up with rope; and the use of bags made of some strong preparation of paper, to prevent the possibility of any pieces of jute from the bag getting into the wool, is being considered. If the wool is sent over to Europe greasy, freight has to be paid on all this dirt and waste; and freight is a serious item. So many of the big up-country stations in Australia are beginning to scour their own wool, before they send it down to the sales.

The official centre for the wool market of the world is in London [1] and the prices that are obtained there are the standard prices. The first auction of Colonial wool that took place there was in 1821, and it consisted of a consignment from New South Wales sent over by Captain McArthur. To-day the sales take

[1] The laying of the cable to Australia made a great difference to the Australian wool grower: it enabled him to know at once the price his wool had fetched, instead of having to wait six months.

place in the Coleman Street Auction rooms six times a year; each sale lasts about fifteen or sixteen days, and about 12,000 bales are sold each day. The buyers view the wool in the early part of the day, and the sale starts at 4 o'clock in the afternoon. Here comes the wool from practically all the wool-exporting countries, all sorted, graded, and packed on the same principles. But though London is the official centre, on the whole less wool tends to be sold there. Australia is developing her own wool sales at Sydney, Melbourne, Geelong, Adelaide, Fremantle, and Brisbane; and in addition New Zealand and Tasmania have their own auctions: and the market in Sydney is nearly as large as that in London itself. The reason is not only that Australia likes to do her own business herself; the smaller wool producers get their money more quickly by selling at the Australian sales, and if a man has not a great deal of capital this is an important consideration. The land policy of the Australian Government lies in the direction of cutting up the big sheep runs into smaller stations, and so the number of 'small men' is increasing, though some of the big squatters still continue to market in London. So the Australian sales account for about three-quarters of the wool produced in Australia.

To these sales come the buyers from the chief wool-importing countries of the world—France, Germany, the United States, and Japan, as well as England; they reckon that by so doing they get the pick of the market. It is the presence of these foreigners which adds animation—were that necessary—to the conduct of the auction; and the foreigners are the heaviest buyers. In 1902 England bought 64 per cent. of the wool offered at the Sydney sale, and the foreigner 36 per cent.; in 1916 England only bought 28½ per cent. and the foreigner 71½ per cent. The reason is that England has long specialized in the weaving of tweeds and the stouter cloths suited for men's wear. It is France more than any other country that goes in for making the finest stuffs. That is one reason why Paris sets the fashion for women's wear, England for men's. The Australian merino is the finest wool in the world; and it is this that is in such

demand by the French and German buyers. But the cream of the whole is bought by the United States. She produces a great deal of wool herself, but it is of a rough, coarse quality. The American farmer has not paid the same attention to the building up of fine-wooled flocks as the Australian squatter has done: he has attempted to change his type of sheep from time to time, according as wool or meat seemed likely to pay best. To build up by careful crossing a breed of fine-wooled sheep is a long process; to spoil the breed, a short one. In addition the American is careless about the cleanliness of his wool: the shearing shed is swept up, and all sorts of impurities get mixed in with the wool. But there is a high tariff on wool imported into America; it is not worth while to pay this high tariff except for the very finest quality wool. So the American buyer only wants the best, and it is then plentifully diluted with the coarser home-grown variety.

An interesting feature of the Australian sales is the advent of Japan as a buyer. In 1916, it is true, she came lowest on the list; but she is steadily going ahead, in the manufacture of woollens no less than of cottons. She is trying to capture as much of the trade of the Far East as she can; and it must be remembered that the eastern markets are enormous and are likely in the near future to develop. In the past Bradford supplied Japan: now not only does Japan supply herself, but she is becoming in her own turn an exporting country. Geographically she is very favourably situated for the trade; her population is skilful and industrious, and at present works long hours for very low wages. As her population increases she will be compelled to rely more and more on her manufactures to support it. Australia is her nearest and most convenient source of supply; and it will be Australia's business to meet the demands of the new customer.

There are also sales in South Africa at Port Elizabeth, East London, Mossel Bay, and Durban. But at present the wool sales in South Africa are not as completely organized as in Australasia, and the great bulk of the wool is sold privately to

large merchants. On the Continent, sales are held at Bremen and Havre; but the chief one is at Antwerp, to which port comes a fair proportion of the River Plate wool.

England is still, as we have seen, one of the chief wool-producing countries, though since 1909 the number of sheep in England has been declining. A good deal of this wool, amounting in 1912 to some 180,000,000 lb., is produced quite close to the manufacturing centres, and, compared with Australia, it has practically no freight to pay. Yet for all that, till 1912 no English wool was sold on the London Exchange, but was purchased direct from the farmers by representatives of the manufacturing houses. But the wool has not fetched the price it should. The English farmer's methods of shearing continue to be as primitive as they were hundreds of years ago, and he makes no attempt at systematic classing and baling, and hence he has not been able to send his wool up to the London sales, for the buyers there, accustomed to wool marketed with scientific attention to detail, would not look at it. Of late years the English farmer has begun to realize what he is losing: the higher price of wool is tempting him to pay more attention to its production. He knows that with his small flocks he cannot afford individually the same exact treatment that the big Australian squatter gives to his wool, and so there has started the experiment of co-operative wool societies in various districts. The farmers in the society charge themselves a small percentage, less than a penny per pound, to cover expenses—and the wool is sent up to the London sales where it has fetched higher prices than if it had been bought direct. Those who have tried it have found the experiment very successful; and it is to be hoped that in the next few years the movement will spread considerably.

The trade in manufactured or partially manufactured woollens and worsteds can be divided in general terms into three parts—tops, yarn, and pieces. The 'top' is the wool prepared ready for spinning: the yarn is the spun wool ready for weaving: the 'piece' is a length of woven cloth either dyed or 'in the

grey '. The export trade in tops is a comparatively new one ; before the war large quantities were sent to Germany, Russia, Italy, Belgium, and Sweden : these countries did their own spinning and weaving according to their own designs and requirements. The yarn merchant is exclusively engaged in the foreign trade, both export and import. Some foreign countries—Belgium, France, Germany—have machinery of a type adapted to the spinning of a class of wool that the English spinner does

THE ANCIENT WOOL HOUSE, SOUTHAMPTON

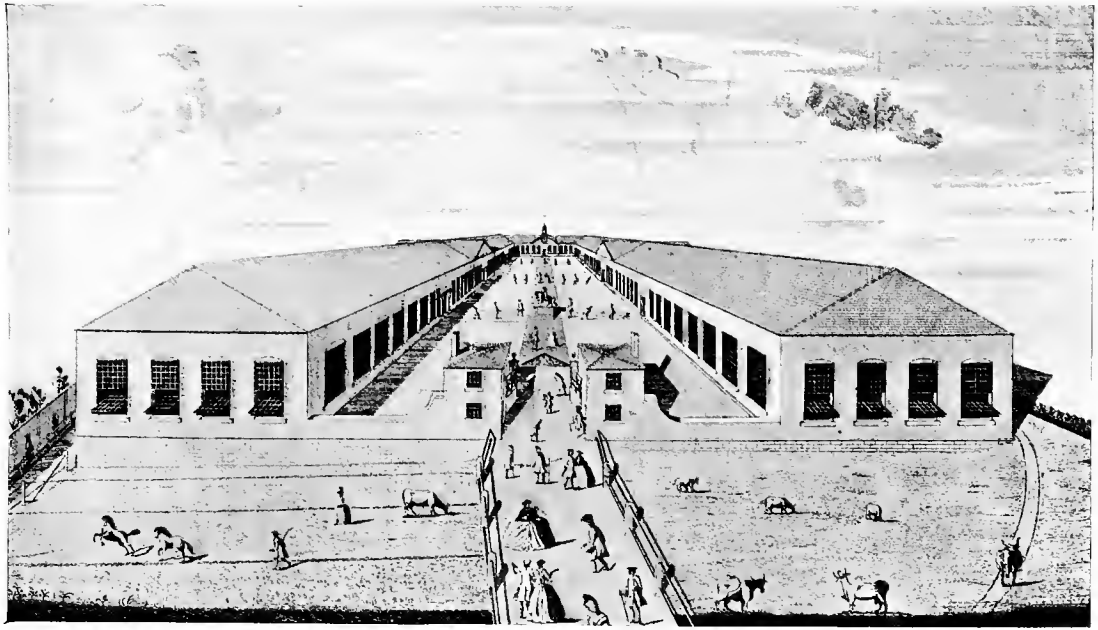
not usually handle. For instance, when first the wool from South America was brought to Europe, it was so rough and full of burrs, that the English manufacturer would not touch it : it practically all went to the Continent, to be treated and spun. Now, by the invention of the carbonizing process, in which the wool is treated with acids which reduce all the vegetable substances to powder, without injuring the wool, the South American wool is extensively used in England. Again, the English manufacturer does not generally ' comb ' wool unless the staple has a length of about two inches ; on the Continent they will comb practically anything. There is therefore a big import trade in

yarn from these continental countries. The 'piece' merchant may deal either in home or foreign markets. In the first case, he buys the finished cloth from the manufacturer and sells to the wholesalers in London, Manchester, Glasgow, &c., who resell to the local retailers. If he is concerned with the export trade, he usually buys the cloth 'in the grey', gets it dyed and finished to suit the particular foreign market he requires, and then exports it.

Tariffs have played a big part in the woollen export trade: countries have increasingly been developing their own manufactures, and have put a tariff on foreign manufactured goods to enable the home manufactured goods to compete on favourable terms as regards price. The United States is a conspicuous example: the McKinley tariff of 1898 cut down very largely the amount of Bradford's exports to that country, which had previously amounted to over three million pounds a year. When the Democratic Party came in under President Wilson, the tariffs were reduced, as the Democrats do not believe in as much protection for native industries as do the Republicans. But although the exports from England went up again, they did not rise to their former level, as the United States had developed her own manufactures in the meantime, buying raw wool and yarn to supplement her own supplies. The table of values of manufactured woollens which England exported to the various countries during the past fifty years shows that the development of the earlier years has not been maintained.

Year.	*Value.*
	£
1870	21,665,000
1880	17,265,000
1890	20,418,000
1893	13,699,000
1900	15,682,000
1910	25,082,000

English cloth is exported to practically every part of the world, though there are considerable differences in the kind and weight of the cloth required in the different countries. The



LEEDS. MIXED CLOTH HALL, opened 1758

demand from Europe is largely for heavy worsteds—and the weights in ounces per yard of cloth vary from 20 oz. for the northern countries such as Denmark, to 15 oz. for Italy and the south. The United States once, as has been seen, almost England's biggest customer in this class of goods, of recent years has been taking considerably less : but Canada takes all qualities, from 15 to 20 oz. weight. Australia and New Zealand do the same, and the weights in demand are 13–17 oz. But Australia is making a serious attempt to start manufacturing herself, for home consumption. A ' top ' factory was established at Botany Bay before the war, which was exporting its product to Japan, and the Australian Government has just started a scheme for subsidizing, to the extent of several million pounds a year, the actual manufacture of cloth. In South Africa there are at present no manufactures ; and it is therefore a good market for all kinds, weights, and shades. The Kaffir trade takes the low grade stuff, and the white population good serges. But the best market for the highest grade tropical suitings, such as Huddersfield produces, is Central and South America, where there is a portion of the population which seems to buy a new suit every other week. There is also a large trade done with the Near and Far East, from the rough cheap cloth manufactured in the Colne valley, which goes to the Balkans, to the finest greys, indigoes, and fancies from Huddersfield, for Egypt and Turkey, and for Europeans and some natives in India.

Some degree of organization has always been found helpful by those engaged in trade. In the Middle Ages we have seen that in each town there were two such types of organization : the Craft Gild, which maintained and guaranteed a certain standard of work, and the Gild Merchant, which spoke in the name of the town and concerned itself, among other things, with the maintenance of traders' privileges both within the kingdom and abroad. The chartered companies of the sixteenth and seventeenth centuries were likewise associations of traders for the organization of their trade, though with a somewhat different object. In that case the main reason for the formation of the

company was the advantage which association gave in opening up new channels of trade abroad. It provided better opportunities for gaining information as to the state of foreign markets, and for influencing foreign rulers to grant trading privileges—as for instance the privileges which the Hanseatic League obtained from Edward IV in return for the aid which it gave him in regaining the throne of England.

As the volume of trade increased and the fairs became inadequate, the weekly market system grew up in the country, and halls were built on the model of Blackwell Hall, which had for centuries been the wool mart in London, and the fourteenth-century Woolstaplers' Hall, which may still be seen opposite to Greville's house at Chipping Campden. Norwich had its Wool Seld, Bristol its Saturday market in Touker Street, Southampton its Cloth Hall. In Yorkshire not only Leeds, but Halifax, Wakefield, Huddersfield, Colne, and Bradford built Cloth or Piece Halls during the eighteenth century. The Craven district of Yorkshire, remembering its cloth market and its earlier fulling mill, still looks to Colne as its natural centre. Halifax had a Cloth Hall in 1708, though the vast quadrangular structure that can still be seen, measuring 100 yards by 112 yards, was not opened till 1779. Wakefield erected a cloth hall in 1710 to signalize the extent to which its trade had grown through the improvements effected in the 'navigation' of the Aire and the Calder. Leeds, whose market held under the open sky in Briggate had hitherto been one of the wonders of the north,[1] declined to be outdone by Wakefield and opened a 'hall for white cloths' in Kirkgate in 1711. By the middle of the century a second white cloth hall was needed; and to checkmate Gomersal, which in 1775 dared to aspire to a hall of its own, a third was opened on the appropriate site of the 'Tenter Ground'. Like the first, this was quadrangular,

[1] It was so famous that, Defoe tells us, 'the refreshment given the Clothiers by the Inn-keepers, being a pot of ale, a noggin of "porrage" and a trencher of broiled or roast beef, for twopence, is called 'Brigg-shot' to this day'

and provided 1,200 stalls. Meanwhile the coloured-cloth manufacturers had built themselves a hall in 1756, with accommodation for 1,770 stalls. Bradford's Piece Hall was opened in 1773. Marketing was carried out in these halls weekly, by strict rules and with great silence and dispatch : there was a time-limit by which all business had to be completed. The buyers were merchants who sold wholesale to tailors and shops—Leeds had a set of such travelling merchants who went all over the country with their droves of pack-horses ; foreign merchants buying for markets abroad ; agents, buying for merchants who could not themselves attend the market, and, of course, the local tailors, shopkeepers, and country pedlars. The system of weekly markets, sometimes called the Cloth-hall System, suited well an industry that was carried on by a large number of small manufacturers, whose output was severally small. With the rise of employers with more capital and with the concentration of the industry in towns there was less need for centres where the cloths could be displayed. As the output of individual manufacturers became larger, it was more worth the wholesale buyer's while to visit his workshop, and the system gradually passed away.

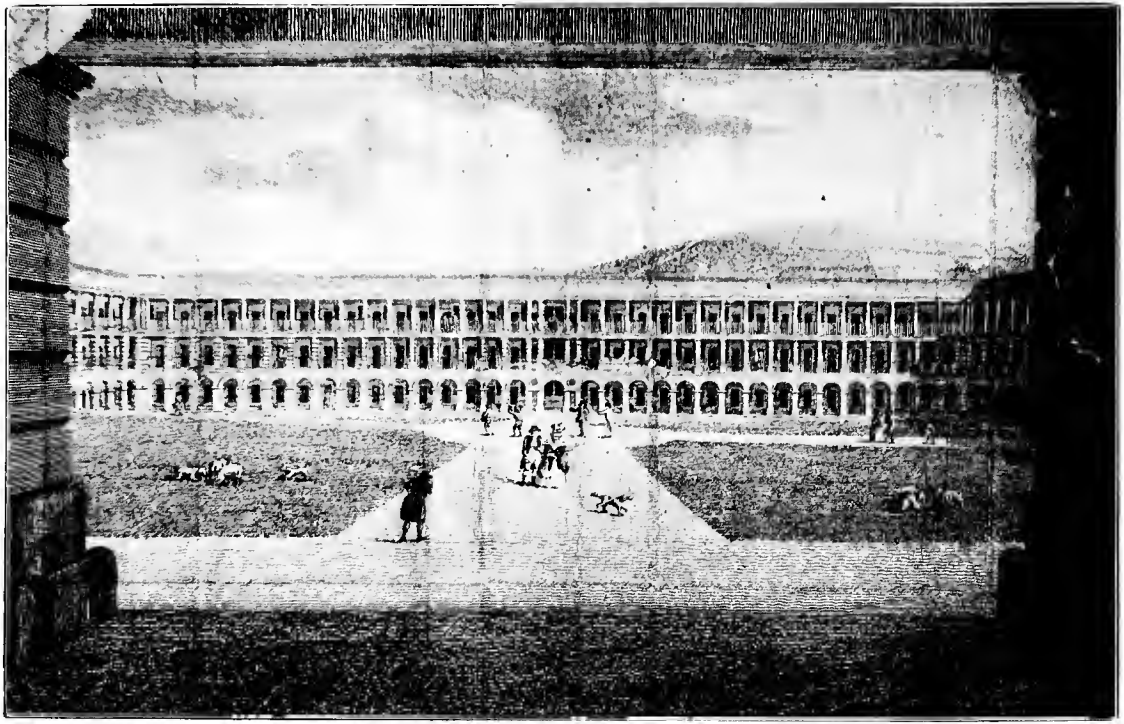
When, however, the trade of the country began to expand again after the troublous times of 1830–40, when England, under Peel and Gladstone, had definitely adopted Free Trade, and hoped that the rest of the world would soon follow her example, the advantages of some form of association were again realized, and in 1850 the Bradford Chamber of Commerce was founded. At first its activities were largely concerned with overseas trade. Although England had been converted to Free Trade, other countries had not ; on the contrary, they were increasing their system of tariffs, and there was a danger that England would be shut out from some of the world's markets. To increase its influence, the Bradford Chamber of Commerce joined forces with other chambers, and a Joint Tariff Committee for the woollen and worsted districts was formed. It gave expert advice to the Government when new trade treaties were under consideration ; in particular it helped Cobden to bring

THE OLD PIECE HALL, KIRKGATE, BRADFORD

about the treaty with France of 1861. Sir Jacob Behrens, who had played an important part in the negotiations, in a special report to the Chamber after the treaty had been signed, said that 'already Belgium and Germany are preparing to follow the example', a prophecy which unfortunately was not destined to be fulfilled. Then the committee turned its attention to the modification of existing tariff conditions to obtain 'most favoured nation' treatment, and to do away with vexatious restrictions. Thus it not only had to deal with the European countries but also with the self-governing Dominions as their native industries developed, and with the newer manufacturing countries, such as Japan and the United States.

Throughout this struggle the Bradford Chamber of Commerce and the other chambers associated with it found they were greatly hampered by the absence of any one Government Department which could deal with such matters. The Foreign Office, which conducted negotiations with foreign powers, was not interested in Trade: the Board of Trade, something of a Cinderella among Government Departments, had not the power to do anything. Bradford wanted a Ministry of Commerce; but, although Gladstone was thinking of the matter in 1882, nothing came of it. To remedy this defect, and to educate both people and politicians in the need for it, there was formed, on the initiative of Bradford, the Association of Chambers of Commerce of the United Kingdom, the first meeting of which was held in London, in 1860. Among the reforms which the Bradford Chamber of Commerce, either alone or in conjunction with other Chambers, can lay to its credit is the present classification of woollens and worsteds in the monthly and annual returns of imports and exports issued by the Board of Trade; the reform of Commercial Law, especially the Bankruptcy Laws; the rating of machinery; the development of the pattern and sample post, and the improvement of the telephone service.

In the organization of its own particular trade, the Bradford Chamber of Commerce has not been less active. At the great Paris Exhibition of 1900, the Chamber got up a collective



HALIFAX. THE PIECE HALL

display, which was, without question, a failure. The exhibition was an object lesson in the progress made by foreign nations and particularly by Germany in textile manufacture. It awakened Bradford to the need of overhauling its methods both of manufacture and of display. It reaped its reward at the 1910 Exhibition at Brussels, where the Bradford Court was crowded from morning to night, and was one of the most popular in the whole exhibition.

About 1885 another problem arose—that of anthrax, or wool-sorter's disease, a mysterious malady which usually ended fatally in about twenty-four hours. The question was an important one for the whole trade, and the Chamber took it up. The first thing to do was to determine the nature and cause of the disease: in 1905 an Anthrax Investigation Board for Bradford and district was set up, with an expert bacteriologist to conduct the investigation; and the annual reports of this Board have led to very great improvements in the conditions under which the sorting of wool is carried out.

Perhaps the most important service the Bradford Chamber has rendered to the woollen industry is the establishment of the Conditioning House, for the 'ascertaining and certifying of the true weight, length, and condition of articles of trade and commerce known as tops, noils, and yarns, and also the true weight and condition of wools'. After an examination of the various conditioning houses on the Continent, the Bradford Conditioning House was finally opened in 1891, in Canal Road and Valley Road, and now ranks as one of the three largest conditioning houses in the world. Exact tests are here carried out, to show the percentage of moisture in samples of raw wool, and, in the case of piece goods, certificates are issued to show the actual length, the actual net weight, the actual weight per yard, &c. Thus certificates can be obtained to satisfy the requirements of home or foreign buyers as to the exact nature of the goods they are purchasing. This is a great step in the direction, which experience has shown to be so important, of the application of exact science to industry.

CHAPTER X

THE MODERN MILL

In any story of struggle and adventure one follows the hero to a certain stage—not the end of his life, not necessarily to the highest point in it—but to a moment of definite achievement, and there one is content to leave him. The sequel might prove less interesting. There is something of this feeling in attempting to take the story of the woollen industry beyond the rapid changes and enormous developments of the Industrial Revolution. It is not that the subsequent achievements have been less. On the contrary, both in output and in the numbers of persons employed they have been far greater. It is not that invention has stopped. The invention of more powerful and more wonderful machinery is proceeding every day. There is no sign of decline or decay. The industry is as fresh and as vigorous as it ever was, and far better organized. This was clearly shown during the great European war, when the British woollen industry clothed the Allies, as no doubt before the war broke out it had already largely clothed the Germans. It responded to every call that was made upon it. But the organization to-day is so vast, the divisions so fine, the specialization so minute, that, standing as we do close to it, it is not easy to depict the structure in its proper perspective—to distinguish the salient from the unimportant features.

Labour is now organized in great trade unions, which have developed steadily since Francis Place, the breeches-maker of Charing Cross, directed from his back parlour the movement that brought about the repeal of the Combination Laws in 1824. In the various stages of the development of the trade union movement—the foundation of the National Association for the Protection of Labour in 1845; the Trade Council of 1860; the legalizing of Trade Unions as Friendly Societies in 1871, and of 'peaceful picketing' in 1874, thus removing the chief restriction that stood in the way of collective bargaining by empowering

voluntary combinations of working men to apply compulsion to working men; the movement towards Socialism as restated by Karl Marx in Germany and Hyndman in England in the eighties; the founding of the Independent Labour Party in 1893, and the great development in the organization and power of the Labour Party during the last thirty years—in all these movements the wool-worker has not taken a part corresponding to the importance of the industry in which he is engaged. There are several reasons to account for this: and the greatest is that the industry has always been a localized one and is subdivided into a great many branches and processes. This has meant the growth of several local and specialized unions, instead of one large one. The fact that the domestic system lingered on so late in the wool industry also hindered the development of a strong trade union, as did the low wage paid to the operatives, who therefore could not afford the weekly subscription. To-day the main aim of trade unionism is still that the worker should have a voice in the shaping of his own destiny—that he should be a 'man' and not a 'hand'. As to the methods to be employed there are two schools of opinion. One party is in favour of Direct Action, that is, of action apart from Parliament. They would insist that unless a certain policy is carried out, whether in matters political or industrial, they will withhold their labour and 'hold up' the community. This is of course unconstitutional, since trade unionists are represented in Parliament like every one else, and have, through the members they have elected, their fair chance of causing their grievances to be heard. The other party would continue to act through Parliament, and would support the extension of such measures as Whitley Councils where employer and employed can meet together to consider matters which are, after all, for the common interests of both.

The trade union gives to the worker the power to wait, so that he can bargain without starving in the meantime: it gives unity of action—he sells his labour wholesale instead of retail and can thus obtain better terms; and it supplies expert know-

ledge of the trade and of the market. At its best it aims at maintaining a standard of living, at securing for its members a fair reward for their labour : the noblest part of its creed is the desire to protect the weak among its members. It is able to secure these advantages from the fact that it is a strong, organized body. It would be an abuse of its powers if it were to put itself and its members first and the needs of the nation second ; to ask for more than is ' fair ' ; to concern itself with a maximum instead of a minimum standard of wages ; to call a strike before reasonable chances of conciliation have been exhausted ; in short, to allow its aims to become merely materialistic.

Though England still grows many sheep it has become to-day a manufacturing country, manufacturing six times as much wool as it can produce at home. In the five years 1910–14 the average weight of wool imported into the United Kingdom was over 782 million pounds, to which must be added nearly 42 million pounds of mohair and alpaca ; the average yearly clip of home-grown wool for the same period was less than 132 million pounds. The insufficiency of the home supply is no new thing. As early as 1660 the demand for home-grown wool was so great that its export was prohibited, and even before that foreign wool was imported. Indeed, the more civilized a country becomes the less successful it usually is in sheep rearing: the sheep is like the colonist—a pioneer going before to prepare the way for civilization.

Before industry could proceed very far capital, as has been seen (Chapter IV), had to be applied to it. The capitalists were not the great landed proprietors, nor the men of hereditary wealth, but came, and have always since continued to come, from the ranks of industry itself. Hardly a penny of the money of the gentry and aristocracy went to the making of the new England that sprang out of the Industrial Revolution. The landowners were too unimaginative, or, it may be, too proud, to grasp the possibilities of the new industrialism. It was, and it still is, the most hardworking, determined, ambitious, and assertive of the workmen and craftsmen who create capital. The capitalists

are the sons of the people, superior to their fellows only in their wits, their determination, and the rare quality of looking ahead and deferring present to future enjoyment; and they it is who have created modern industry, and enabled these islands to support a population of forty instead of perhaps ten millions.

Before capital could be used to any extent in industry some means had to be found whereby the trader could keep it safely, and obtain sums on credit when he had not enough to carry on with. A clothier might, for example, have got all his money 'tied up'; he might have spent it all on raw wool and yarn, which he had given out to his carders, spinners, and weavers to work up. If he could not obtain money on credit his business would be at a standstill until these had done the work and he had sold it at the market.

This business of keeping money safely and lending it out on credit was at first done by the Goldsmiths' Company. The Goldsmiths began by taking care of money at a small charge. Soon they began to lend this money out at interest to people who wanted to borrow it. In short, they were bankers. Charles II, who like all the Stuarts was always short of money, borrowed big sums from them at 8 per cent., and upset them very seriously indeed when he announced in his airy way that, though he would go on paying the interest, he could never pay back the sums he had borrowed. This showed that the work of banking was too serious and risky a matter for a private company, and in 1694, when William III badly needed money for his war against Louis XIV, a national[1] bank—the Bank of England—was founded.

The banking system enables traders and manufacturers to regulate and control their money, to obtain it when and as they

[1] National, that is, in that it originated in a loan to the Crown, was guaranteed definite annual interest, obtained a monopoly under Acts of 1697, 1708, and 1800, and by the Bank Act of 1844 got the sole rights among banks of issuing legal-tender notes. No other limited liability Joint Stock Bank was set up till 1862.

want it. The basis of the money system is the sovereign, which is literally ' worth its weight in gold ', and is worth its face-value even when it is melted down. It may look at first sight as if this is not important, since money is only a measure of value and a means of exchange, and paper money or iron money would serve these purposes so long as the Government were to fix its value. Paper money or iron money would serve for home purposes, if the Government were strong and resisted the temptation to issue too much of it and so upset the steadiness of prices. But trade is international as well as national. The value set upon a paper sovereign in one country is not recognized in another country. Gold, however, is international and has its value all the world over. In the great European war the use of gold was at once stopped at home and paper money issued instead, in order to prevent gold leaving the country on private enterprise, so that the Government could itself use the gold in buying necessary war material and foodstuffs from countries that would not accept our paper money or give us unlimited credit.

BANK OF ENGLAND. The early building

Gold is the basis of international trade ; but it is not continually shipped and reshipped across the sea with every business transaction that takes place. Business between one country

and another is usually done by means of Bills of Exchange. These bills of exchange are saleable. If an English merchant buys goods from America, he must buy a bill of exchange from an English banker to send to his client in America, who will in turn sell the bill to an American banker. If the two countries are trading pretty equally with one another there will be as many bills on one side as on the other, and the price will be the same as the face value. But if, as during the war, England was buying far more from America than America was buying from England, the bills of exchange would be cheaper in New York than they were in London. So in London the merchant would have to pay more for a bill than its face value, and the international exchange would be described in the commercial world as 'unfavourable' to London. There would be nothing to prevent this going on indefinitely were it not for the check exercised upon it by the international value of gold. Bills of exchange are used to save the cost and risk of transmitting actual gold, and it is the fact that gold keeps its value all the world over that sets a limit to the decline in value of the bills of exchange of one country in another country. The lowest point of the decline will be the point at which it is as cheap or cheaper to send gold to settle the account than to buy bills of exchange above their face value. For a London merchant will not pay more for the right of obtaining so much gold in New York than it would cost in freight, insurance, commission, and the rest, to send the amount of gold from London to New York. But within this limit, fixed by the cost of transmitting gold, the premium on bills of exchange rises and falls with the fluctuations of the market.

The banking system was growing up all through the eighteenth century and latter half of the seventeenth century, while the woollen industry was still a domestic one. There was division of labour, and there was opportunity for the use of capital, as the following details show: they are taken from a pamphlet of 1737, computing the amount of work provided in Gloucestershire for one week by one pack of wool (240 lb.) which is made into broadcloth:

	£	s.	d.
A man to sort it and dry it		8	0
Dyeing and cleaning it	1	10	0
4 men and 2 boys to scribble it	2	8	0
30 women and girls to card and spin it	6	0	0
4 boys to spoole and wind quills		10	0
4 women to burle it		12	0
5 women to scour, full, row, shear, rack and press it	3	4	0
8 men to weave it	4	16	0
Total: 58 persons, employed for a week for	19	8	0

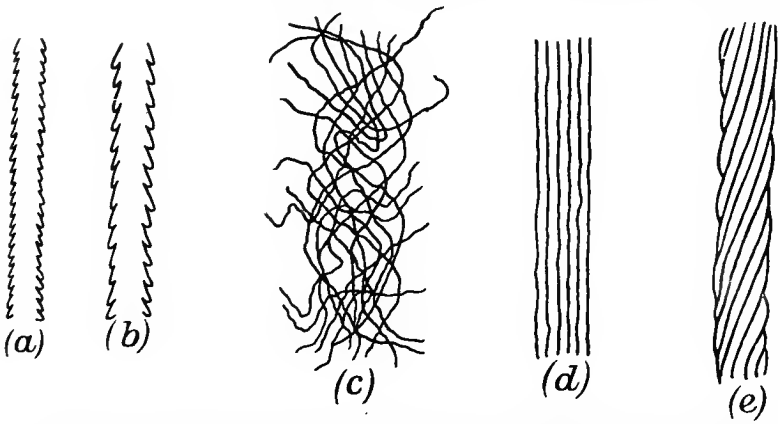
But the domestic system, with the work done at home by the aid of hand-worked machines, whose pattern was unchanging, was not conducive to progress or development. The methods, like the machines, were handed down from father to son and from mother to daughter. The weavers and spinners were conservative people, and one of the causes of the decay of the industry in its two historic seats of the west of England and East Anglia was that when the new inventions came the workers were too conservative to adopt them. The Norwich clothiers were famous for their courtly manners and their fashionable dress. They continued the custom of wearing swords after it had gone out of fashion elsewhere. Gloucestershire, if less stately, was equally conservative: 'until the Yorkshire manufacturers had stolen the article away from us we were almost afraid to introduce it.' The development of the woollen industry into the great organization which we see to-day began with the inventions. England naturally secured a long start because the new inventions were made by Englishmen. The peace, which she owed to her island position, once again helped the wool trade to 'boom' afresh. The development of the colonies, to which the famous Report of Lord Durham on Canada in 1837 ensured eventual self-government, furnished an expanding market and a new source of raw material. English railways were relatively far more advanced for many years than continental ones. The establishment of Free Trade—begun by Peel in 1843—gave a fresh impetus to commerce. Meanwhile, the nearness of coal to drive the machines redistributed and centralized the industry. To-day the manu-

facture of hand-made cloth is confined to the north and west of Scotland, where some 6,000 crofters still carry on the trade in the old way and jealously guard their hereditary secrets of dyeing and finishing. The true Harris Tweeds—named from the Island of Harris—still come from the Hebrides. This industry is a genuine survival. But elsewhere machinery has ousted the hand-loom as the factory has replaced the home—and the whole trade is both specialized and localized.[1]

Bradford confines itself chiefly to the manufacture of worsted and the spinning of 'tops', though it has also one of the largest dyeing industries in the world. Designing has become a special art in itself, and Huddersfield, among other towns, is famous for its beautiful designs and its high-class cloths. Leeds is prominent as the centre of the wholesale clothing trade. The making of machinery for spinning and weaving has become specialized and is largely done at Keighley and Rochdale. Rochdale also makes navy and army flannels. Witney still makes blankets, and the Stroud Valley still produces the highly finished 'West of England' cloths that are used for hunting coats, uniforms, liveries, motor coats and caps, buckskins, beavers, meltons, vicunas, lamas, and cheviots, and those beautiful cloths that are used for pianos, carriages, and billiard tables. Stroud to-day is a busy place, and with its mills, steep valleys, and swift streams suggests a miniature and less smoke-laden West Riding. Leicester and Nottingham are the centre of the hosiery trade in England—though the woollen yarn they use is spun almost entirely in Yorkshire—as Hawick and Galashiels are in Scotland. Halifax, so famous in the past for its kerseys, now rivals Dundee in its production of carpets—a trade in which long wools are mostly used. Here again the old place-names have become misleading

[1] One may read references to its disappearance in Memoirs of the last century. The Cornish poet R. S. Hawker, Vicar of Morwenstow, for example, records in 1865 that there were no women left in Morwenstow 'who spin yarn with a wheel' 'There is actually not one left in Morwenstow, and in Wellcombe only one, and she 80 years old. She is spinning, however, for me this year again the wool from my black sheep, which I always wear.' Byles, *Life and Letters of R. S. Hawker*, pp. 525–6.

and represent rather processes and types than places of manufacture—like the names of cheeses. No carpets are now made at Axminster. Few Kidderminster carpets are made at Kidderminster, which is now busied with Wiltons, Brussels, and Axminsters. Brussels carpets hail to-day from Halifax, Rochdale, and Dundee. Wilton is the exception. It does still make Wilton carpets. At Dewsbury, Batley, Ossett, Morley, and Heckmondwike a large trade in ' shoddy ' has grown up. Shoddy is not an



(*a*) Merino fibre and (*b*) Lincoln fibre, showing serrations. (*c*) Carded wool, showing entangled arrangement of fibres. (*d*) Combed wool, showing fibres lying parallel. (*e*) Worsted yarn, showing, in exaggerated form, the smoothness of surface.

attractive word. But the trade is not to be despised : indeed, it is to be honoured as one of those important trades whose object is to conserve what would otherwise be waste products and so increase the material resources of the world. Not only does it use again all patterns and clippings from tailors' shops, but it shreds up, cleanses, and uses again large quantities of old material. The trade in shoddy thus increases materially the world's wool supply.

The production of worsted goods—the old Norwich trade—is more highly specialized than the production of woollen goods.

The majority of woollen manufactures start with the raw material and produce the finished cloth. In the worsted industry, on the other hand, it is the exception to find a manufacturer who both spins and weaves. The wool for woollen goods is carded, and is chiefly the wool of shorter staple. The wool used for worsted is combed. But to-day, so great is the power of modern contrivances to alter and adapt, this distinction is less pronounced. Indeed, the tendency is to distinguish wools less for the length of their staple than for their felting qualities: and in the manufacture of worsted felting is not necessary. Cotton is also used nowadays in worsted. It gives greater strength to the warp, and, being vegetable, is unaffected by many of the dyes that colour the woollen part of the fabric, and so helps to produce the pattern. Before cloth 'in the grey' (i. e. undyed) is sent to be dyed, the owner's name or mark is often woven through one end of it in cotton: this cotton retains its colour and so remains perfectly legible after the process of dyeing.

Machinery is now employed throughout the woollen industry and begins at the moment at which the wool is to be removed from the sheep's back. In oldest days it was barbarously pulled from the sheep.[1] Then for some centuries shears were used, and they are still used to-day. But where there are great numbers of sheep to be shorn shearing has become a specialized industry. There are 30,000 professional shearers in Australia, who are peripatetic—that is, they go round in the shearing season from centre to centre. In England with hand shears a farm-hand may shear perhaps 30 sheep a day. These professional shearers, with the aid of steam or electricity, can do 100; a quick worker will do 120 in a day of nine hours. The machine is constructed on the principle of a horse-clipper—that is, the cutter is protected by a comb. In shape it is like a small trowel. It is made of brass, and worked by means of a steam turbine or by electricity. There

[1] Cf.: A gown made of the finest wool
Which from our pretty lambs we *pull*.—MARLOWE.
This practice of pulling the wool still held in the Orkneys sixty or seventy years ago.

are centres in Queensland and New South Wales where it is quite normal for 4,000 sheep to be sheared in a day.

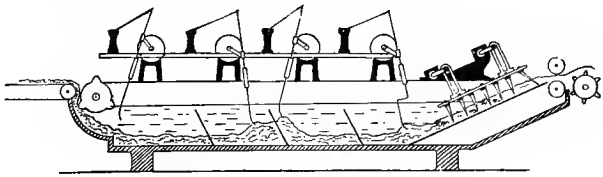
A more accurate sorting takes place when the bales reach the mill, and the first process through which the wool then has to go is scouring, or washing. Iron forks—made to move very gently by machinery—push it slowly forward through a succession of troughs towards rollers, which squeeze it and dry it. When it has been scoured enough it is carded. The old cards were like two square brushes fitted with iron bristles with bent teeth. The wool was laid on one and then drawn gently off with the other and so opened out ready for combing. The modern cards are cylinders fitted with bent wire teeth. They first open the wool out into a thin veil, from which any sand and foreign substance left after the scouring can fall, and then the same machine gathers the wool together, passes it through a funnel and hands it out in the form of a loose rope or ' sliver '.

After this, oiling must be done—for the scouring takes all the natural oil out of the wool, and leaves it too brittle. A process of scouring that does not deprive the wool of its natural oil has not yet been discovered. After its oiling the wool is ' gilled ' —which means the fibres of the sliver are straightened to prepare it for the comb.

For many years after spinning frames and looms were steam-driven combing continued to be done by hand, the wool being lashed on to a fixed iron comb with several rows of teeth, while it was combed by another comb, heated in a charcoal stove and worked by the hands. After the combing the long wool left in the ' slivers ' was rolled up into balls known as ' tops ', while the short wool taken out in the process of combing was known as ' noils '—as is the case to-day. The ' top ' is used by the worsted spinner, while the ' noil ' is used for flannels, blankets, hats, and woollen cloths. The Bradford names of Cartwright, Donnisthorpe, Lister, and Holden are all associated with the development of machine combing—and Mr. Cunliffe Lister—afterwards Lord Masham—erected the Cartwright Hall in Lister Park, Bradford, to the memory of his brother inventor. But it was

James Noble who finally produced the revolving circular horizontal comb that is in general use to-day in England. Combing has become very largely a Yorkshire—indeed one might almost say a Bradford—industry. Out of the 3,000 machine combs in the kingdom, 2,600 are in Yorkshire.

The next process is spinning or twisting the wool into uniform threads for weaving. The two essentials in spinning are the drawing out of the wool to give it sufficient and uniform fineness, and giving it sufficient twist, for the twist gives the yarn its power of resistance. Lewis Paul's invention of a means of drawing out the sliver by passing it between successive pairs of rollers, each revolving at a greater speed than the one before, began the long series of invention that replaced the old distaff



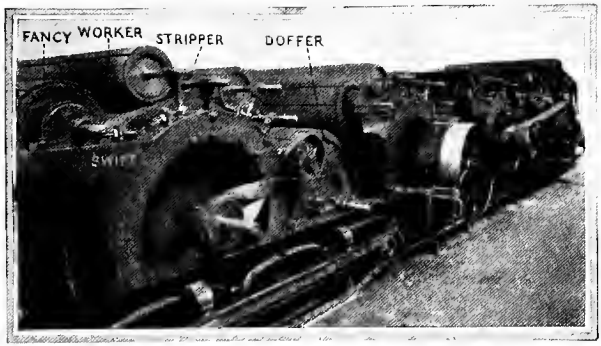
SCOURING TANK

and spindle-wheel. Lewis Paul made his invention in 1738. Arkwright embodied it in his machine thirty years later, and it remains a fundamental principle of all modern spinning machinery. In the later stages of spinning the yarn has to be wound on to bobbins, and modern machinery continually effects a change in the speed at which the bobbins revolve as they get fuller, so as to secure uniform tension all the time they are filling. There are now also machines which automatically 'doff' the full bobbins and put empty ones in their places. But such machines are not yet common, and the work of doffing is still chiefly done by children, who can also see when a thread breaks and deftly piece it up. Five children can change a frame of 100 bobbins in half a minute. Until very recently this work was done by 'half-timers'—children of ten years old and upwards who worked half a day at a mill and attended school the other half.

But this system is now happily abolished and the school-leaving-age is raised to fourteen.

Several processes remain before the spun yarn is ready to be woven into a piece of cloth. It has to be arranged in uniform order and length. Often it is 'sized'—that is passed through a solution of weak glue—to give it greater strength and compactness. Then it has to be arranged on the warp-beam.

All that on the old hand-loom, with its treadles and levers, was done by the feet and hands of the weaver, and much more,



SCRIBBLER. There is little difference between this and the Carder, but the latter has finer cards. The wool travels towards you as you look at the machine from this point of view. The wool is not shown in the photograph.

is now done by automatic machinery, which moreover enables intricate patterns to be woven. The weaving of patterns has been much advanced by the invention of a Frenchman, Joseph Marie Jacquard of Lyons. Jacquard had his machine broken up in 1801, just as the English inventors had theirs broken by his fellow workmen. But

> Nations slowly wise and meanly just
> To buried merit raised the tardy bust,

and a fine monument now stands to his honour on the place where his first machine was destroyed.

An automatic loom known as the Northrop loom—invented by

Northrop, who though resident in America was born in Keighley —is now becoming increasingly popular. Its advantages are that it stops automatically when a thread breaks, thus avoiding the danger of spoiling some inches of cloth before the weaver has detected the break and stopped the machine himself, and that it replaces its own exhausted weft-bobbins—thus again avoiding the stoppage of the machine for the weaver to do this by hand. In both ways the Northrop automatic loom so effectively reduces the weaver's work—the detection of broken warp threads and the constant shuttling of weft—that instead of three or four looms he is enabled to manage eight or nine. There are other automatic looms. One, the Swiss 'Steinen' loom which is much used in cotton mills on the Continent, replenishes the weft by means of electricity, and the shuttle is threaded by compressed air. A small electric light flashes on to attract the weaver's attention whenever the loom stops automatically for a broken thread.

When the cloth is woven it has to go through the series of processes known as 'finishing'. For many years after the English weaver had learnt to weave his own wool into cloth at home, he still sent it to the Low Countries to be finished, and the wise Dutchman long guarded the secrets of many of the processes of the finishing stage. To-day cloth is finished at home. Inch by inch it undergoes minute examination by women specially trained for the work. Defects are made good by needle and thread, the knots, left by broken strands, are removed, threads are straightened out, spots and grease stains are taken out. Very likely it is 'milled'—that is pounded and hammered in order to shrink it, and to strengthen it by closing up the fibres, though only woollen cloths, not worsted ones, are treated in this way. For centuries fulling mills were the only mills used in the woollen trade, and the use of the old word 'milling' for this process in the cloth-finishing is a survival from the olden days of the wool trade—interesting historically as a little bit of the past living on in the present.

There are many other processes employed in finishing cloth—varying according to the purpose for which the cloth is required.

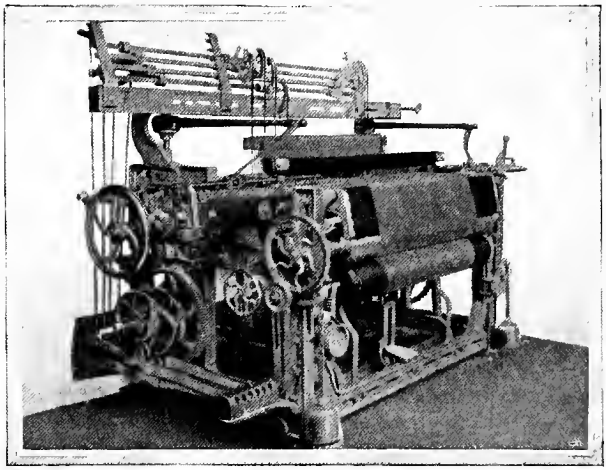
A nap is raised by means of teasels. The cloth is cropped, often more than once, not as of old by the shearer, but by machines like very refined lawn-mowers. It is ironed, stretched, brushed, rolled, and dyed. But dyeing has become a separate industry.

It used to be the practice for cloth to be dyed in the piece, after leaving the loom. A great deal of cloth and much worsted is still dyed in this way. But it is becoming more common for the yarn to be dyed first and spun afterwards, as this is found to ensure more uniformity of colour, and a greater certainty of reproducing exact shades. Until fifty years ago dyes were mostly natural and vegetable, and until the discovery of the New World the process was costly: to dye sixty yards of cloth the famous Tyrian purple would have cost £1,000. The New World produced dye-stuffs—indigo and logwood—abundantly and therefore cheaply. Moreover, the supply from the American colonies was restricted to England and was admitted free of duty. 'Synthetic' dyestuffs were not used in England till 1858, when Perkin discovered his famous mauve. But dyeing owes its development mainly to Germany, where it was done with characteristic thoroughness, science, and secrecy. At the outbreak of the war in 1914 Germany had upwards of two thousand dyestuffs on the market, many of them products of coal tar. Good dyeing became of great importance to the woollen industry in 1834, when the practice of weaving a worsted weft in cotton warp began. If the process was to be economical it was necessary to find a dye that would affect both the cotton and the worsted in the way desired. The same difficulty presented itself to Sir Titus Salt when he began to introduce his famous alpaca.

TEASEL

From early days 'merchanting', that is the work of distributing the manufactured cloth, of keeping manufacturers informed

of the needs of the market, and of finding fresh markets, was done by a special class of people. The Merchant Adventurers did this kind of work, though they were shippers as well, and very pushful their methods often proved. To-day the vast size of modern undertakings, the complexity of the business of managing a large mill, of keeping pace with developments in the trade, and of keeping in touch with the armies of persons employed, have necessitated a corresponding increase in the business of merchant-

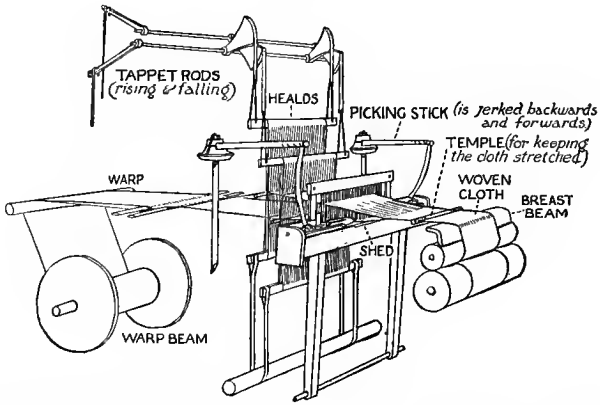


SINGLE-SHUTTLE FOUR-TREAD POWER-LOOM

ing. Manufacturers managing great mills have little time to follow the home, much less the foreign, markets. The merchants are, therefore, no mere parasites making their living out of a trade they do nothing to advance. Like their forbears, the Adventurers, they still push new markets. They advise and stimulate Government departments in the struggle of contending tariffs, sometimes winning substantial triumphs as Sir Jacob Behrens did in the Commercial Treaty with France in 1860. In foreign markets it is they who face all the difficulties of language, exchange, and credit : often they buy ' cloth in the grey ' and the responsibility

of dyeing and finishing it to suit the fashion of the moment is theirs. The bigger merchants have their representatives in the markets with which they deal. Indeed, were it not for the merchants each manufacturer would have to face all the problems of the market for himself and increase his staff and his expenses accordingly. The merchants fill a necessary place in the wool

SHUTTLE

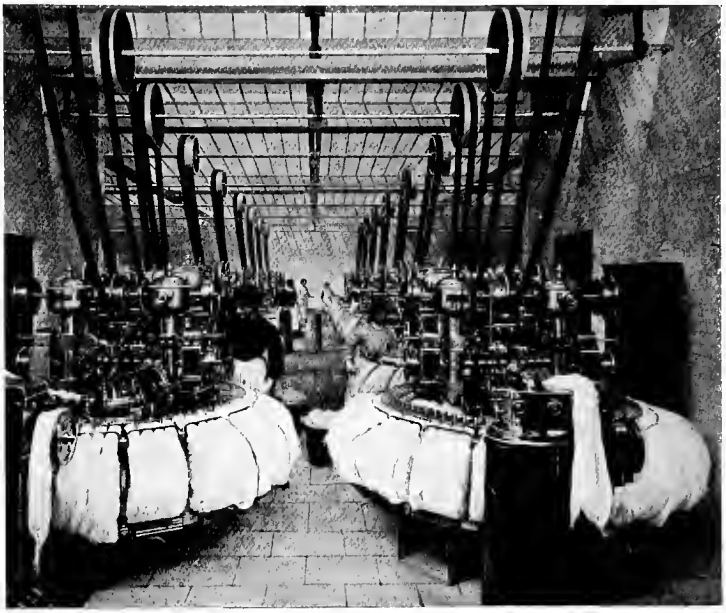


WORKING PARTS OF A POWER-LOOM, driving parts omitted

trade, and their existence enables the trade to be conducted not only more efficiently, but by fewer hands than would otherwise be possible.

Halifax used to be the chief seat of the Yorkshire woollen industry—chief in the worsted manufacture and important in merchanting. This is still testified silently by old milestones about the Riding, which state the number of miles not to Bradford, nor even to Leeds, but to Halifax. But Leeds, till perhaps 1840, was the chief centre for finishing, selling, and delivering. Bradford not only captured the worsted industry and made sure

of it by the well-timed improvements which some of the great pioneer mill-owners, like Sir Titus Salt of Shipley and Mr. Foster of Queensbury effected ; but soon after 1830 some merchants of Jewish extraction, of whom Sir Jacob Behrens is the best known, settled in the city and by their skill and knowledge and with

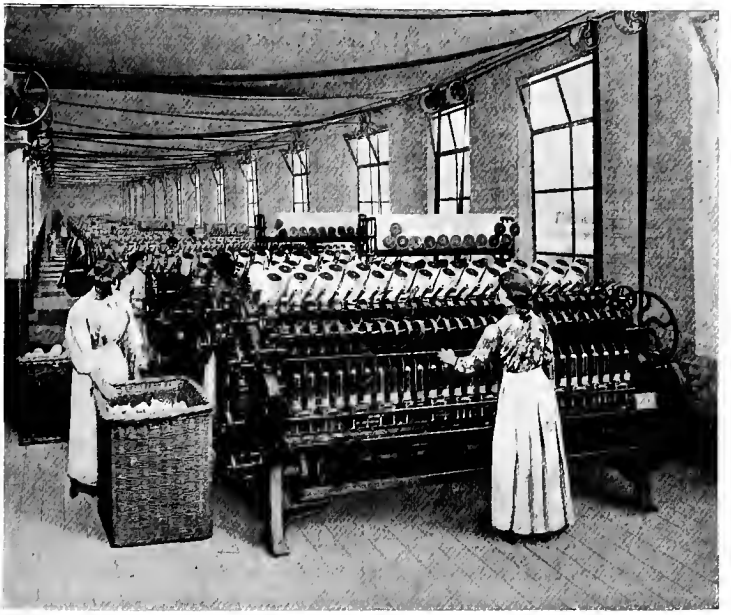


WOOL COMBING

the support of their German bankers, were able to attract the merchanting of worsted goods to Bradford, which henceforward took the place of Leeds as the centre of the merchanting of wool. The finishing processes of manufacture are so closely associated with the merchanting of the cloth that the transference of the merchant trade necessitated a transfer of the dyeing industry and was the cause of the beginning of Bradford's importance as a dyeing centre.

For before Bradford could attain its present position as the

capital of the wool world, it had to establish a supremacy in dyeing as well as in weaving. Its water supply gave it an initial advantage—it had been celebrated for its dye works as early as the fourteenth century. But up to 1830 there was only one set of dye works at Bradford; most of the cloth had to be sent to



WOOL SPINNING

Leeds to be dyed, and some even to the west of England. There is the story of a mill at Cleckheaton that manufactured army cloth for the Government but had to send it to the west of England to be dyed the bright scarlet required. One of the foremen was therefore sent down to the west, who, by playing the part of an ignorant countryman, and by making friends with the workmen in the village inn, managed to get taken over the mill, and saw the dyeing process. Thus he learnt the secret, and afterwards his patrons were able to manufacture their own scarlet

dye at Cleckheaton. Also about 1830 there came to Bradford two German merchants, who had previously been engaged in dyeing at Leeds. Dye works were set up in Bradford on a large scale ; and to-day the Bradford Dyers' Association is the largest concern of its kind in the world.

To this may be added other circumstances which might almost be called accidental, such as Titus Salt's discovery in a Liverpool warehouse of an experimental consignment of alpaca : he took back a sample with him, discovered how, by an adaptation of his machinery, it could be spun and woven, and so started the alpaca industry at his mills at Saltaire, which now produce over 5,000,000 lb. annually, the whole of which is absorbed in the Bradford trade.

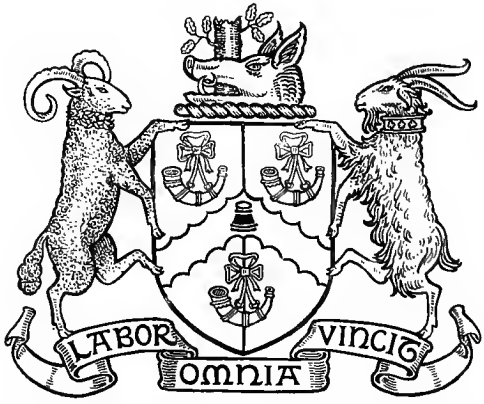
Geographically, as we have seen, it is not easy to explain why Bradford has become the wool city of the world. It has not good access to the sea. It was on no great highway or waterway. Even now it is not on a main line. It lies in a hollow, and the roads out of it have to ascend steep hills. It has no long history of fame. Except for its cathedral church all its churches are of recent growth. Christ Church, the oldest, was built in 1813—while the oldest of the Free Churches can scarcely go back beyond 1800. On the other hand its position in the north of England is strikingly central. It is midway between the North and the Irish seas, and stands at the junction of four valleys. It is well placed alike for water power, for coal, for iron, and for building stone. Above all, like Verviers in Belgium, whose woollen industry of 500 years' standing arose from the peculiar freedom of its water from lime, Bradford has an abundant supply of lime-free water, fitted by nature for the washing of wool and dyeing. But it is essentially a modern city. In 1800 it had one spinning mill and a population of 13,000. Fifty years later its population was over 100,000 and its mills about one hundred and thirty. After 1850 the foreign trade of Bradford began to increase, and the question of the sufficiency of supplies of raw material began to grow acute. Australian wool was brought over to England as early as 1808, and that year some of it was woven

into cloth at Guiseley. But the wool was thought to be too short for worsteds—and it was not till twenty years later that it began to be used for worsted goods. Little was so used for many years. In 1860 the Bradford Chamber of Commerce, estabished ten years earlier, set up a Wool Supply Committee which soon influenced not only the quantity of wool Australia was producing, but succeeded in making great improvements in its quality, and in introducing long-wooled sheep into India and promoting the growing of mohair at the Cape. This was the Bradford Chamber's first triumph.

The presence of coal and iron, more than any other single cause, is the explanation of Yorkshire supplanting Norfolk and the west of England as the main seat of the woollen industry—of four or five hundred square miles of its hilly and remote countryside, with not a single township of more than 30,000 inhabitants, becoming a vast and almost continuous manufacturing area supporting more than ten times its former population. But no one can visit the West Riding without feeling that coal has to a large extent spoilt the beauty of the countryside. Journey across the north of England, it has been said, and you will see 'acres ruined for the making of a pin'. It is more than pins that the north of England manufactures for humanity; but the acres are ruined—so far as beauty and fresh air are concerned—none the less.

There is no reason why machinery should always be driven by coal any more than it was always driven by water power. The cotton mills of Bombay are driven by electricity, generated from the water power of the Western Ghats. Switzerland converts its water power extensively into electric power. Southern France has wrested electric power from the waters of the Pyrenees. England has not sufficient water power to supply her with electricity on a large scale, but electric power can also be produced by means of coal. Geologists have warned us that our coal supply, at the present rate of consumption, can only last for a limited number of years. The price of coal is rising enormously, for other reasons. Both prudence and economy thus point to the

need for reducing consumption of coal. Electric power can be generated economically when it is carried out on a large scale in Superpower Stations. Two or three of Bradford's mills are already driven by electricity, and a day may dawn when the only tall chimneys to be seen will be those in electric power stations and iron works. Then the natural beauty of the north of England will come to its own again : its valleys will be exalted ; and the woollen industry, unrivalled in the services it renders to mankind, epic in its destiny and its traditions, will see once more surrounding its later stages something of the green fields and the clear skies that have from time immemorial been the glory of the sheepfolds.



COAT OF ARMS OF THE CITY OF BRADFORD

The Supporters, a ram and an angora goat, bear witness to the principal industries of the city

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